THE
ARCHAEOLOGY
OF
ECONOMIC
IDEAS

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The Classical Greek Tradition

S. Todd Lowry

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When dealing with history of philosophy we are dealing with archaeology of notions.

—Felix M. Cleve, *The Giants of Pre-Sophistic Greek Philosophy*

Learning exists for people, and not people for the sake of learning; we study antiquity in order to use it for our own purposes.

—Hugh Lloyd-Jones, *Blood for the Ghosts: Classical Influences in the Nineteenth and Twentieth Centuries*

Contents

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Chapter II is a revision of an article which originally appeared in *History of Political Economy* in 1981, and Chapter VII is an extensively revised and expanded version of an article that appeared in the same journal in 1969. I also quote a fairly long passage on Adam Smith's possible debt to Xenophon on the subject of the division of labor from my article "Recent Literature on Ancient Greek Economic Thought" in the *Journal of Economic Literature*, 1979.

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Note: I regret that James Boyd White's *Heracles' Bow* came to my attention too late to include a discussion of its compatible treatment of rhetoric and law in Chapters V & VI.

Preface

Several different strands of intellectual life coalesce in this study. First, the rich heritage of formal classical learning that has been part of the European educational system was drawn into my formal training in a college-level course in classical civilization. This exposure resonated with vivid images from my early childhood when my father drew on Bullfinch's mythology for bedtime stories and my maternal grandfather dramatized his recreational reading in ancient history to entertain grandchildren on long summer evenings. When Professor Harry J. Leon at the University of Texas, my classical civilization teacher, urged a little book upon me called *Modern Problems in the Ancient World* by F. B. Marsh (University of Texas Press, 1943), I was exposed to a colorful popularized correlation between the ancient economic and political crises in Solon's Athens and the Rome of the Gracchi with the political and economic tribulations of the 1930s.

As a student interested equally in economics, philosophy, and history, I took it for granted that it was as widely accepted that ancient Greek thought had as much continuity in the development of economic and political thought as that recognized in philosophy and literature. After a sojourn in the study of law, I returned to economics with strong interests in cultural geography, natural resources, and intellectual history with an appreciation of legal theory or jurisprudence as the carrier of many intellectual patterns into modern thought. Naturally enough, I went back to the ancients for foundations. After a rather exploratory Ph.D. dissertation accomplished without the benefit of any prejudicial supervision in this area, I was confirmed in my sense that an anthropocentric and interventionist attitude toward the natural environment, reflected in Greek thought, was the foundation for modern ideas. The bipolar foundations of modern economics found in Adam Smith with his emphasis upon labor and entrepreneurship, and the emphasis of Quesnay and the

French physiocrats on natural wealth in land which was subject to development by human activity, seemed to follow easily from the Greek beginnings. I dismissed Schumpeter's rather narrowly conceived rejection of ancient Greek thought as contributing little to modern economic analysis as an emphatic answer to the wrong question and began to search the writings of classicists for a richer appreciation of the way the philosophical underpinnings of modern economic theory grew out of the mainstream of our literary and philosophical heritage.

A strange intellectual panorama began to emerge—one in which new works were appearing daily analyzing our ancient debts in areas from physics to city planning, politics, and philosophy to mathematics and the exact sciences. However, in the field of economics even classicists by 1970 were led to accept the tenet that economic science sprang full-blown from Zeus's head in 1776 with Adam Smith's *Wealth of Nations*. This strange discontinuity in the general character of western intellectual history seems clearly dependent upon a definitional anachronism in which the ancient references to the cluster of ideas around economics is rejected as unrelated to the major premise of the naturalistic and individualistic ideology of the eighteenth century. This ideology was committed to demonstrating the pristine primacy of an independent market system, disembedded from political and traditional constraints. It is not necessary, when recognizing the ideological and structural interaction of market-oriented political economy with the industrial revolution, to reject its conceptual debt to the past. Most of the formally educated nineteenth-century economists made explicit their interest in and recognition of the perspectives inherited from the Greeks. It is under the shadow of the unfortunate contemporary rejection of classical roots for economics, almost alone among modern disciplines, that I offer this attempt at a systematic survey of ancient Greek ideas that provided important foundations for modern economic and legal analysis. Because of this strange pattern of denials by some influential scholars in recent years in both economics and the classics, I look forward to a lively and controversial reception for this work from those social scientists who have a vested interest in asserting the operational originality of modern economic analysis, and those classicists who have developed a vested interest in denying the influence of ancient economic, ethical, and political theory on modern economics.

S. Todd Lowry
Lexington, Virginia
May 6, 1987

Abbreviations Used

AESCHYLUS

Supp.	*The Suppliant Maidens*

ARISTOTLE

Ath.	The Constitution of Athens
N.E.	*Nicomachean Ethics*
Pol.	*Politics*
Rhet.	*Rhetoric*

DEMOSTHENES

Or.	*Orations*

H. DIELS AND W. KRANTZ

D.-K.	*Die Fragmente der Vorsokratiker* (Berlin, 1951–54).

HOMER

Il.	*Iliad*
Od.	*Odyssey*

PLATO

Euthyd.	*Euthydemus*
Gorg.	*Gorgias*
Protag.	*Protagoras*
Rep.	*Republic*
Soph.	*Sophist*
Statesm.	*Statesman*
Theaet.	*Theaetetus*
Tim.	*Timaeus*

PLUTARCH	
Mor.	*Moralia*
THUCYDIDES	(Thuc.)
XENOPHON	
Cyrop.	*Cyropaedia*
Oec.	*Oeconomicus*
Mem.	*Memorabilia*

Translations

The following translations of Greek works were used in this study.

Aristotle. *Politics*. Translated by Ernest Barker. Oxford: Clarendon Press, 1946. All other translations of Aristotle's works cited are from *The Works of Aristotle Translated into English*, ed. W. D. Ross. 12 vols. Oxford: Clarendon Press, 1908–52.

Euclid. *The Thirteen Books of Euclid's Elements*. Translated by Thomas L. Heath. 2nd ed., revised with additions, 3 vols. New York: Dover Publications, 1957.

Freeman, Kathleen. *Ancilla to the Pre-Socratic Philosophers*. A complete translation of the Fragments in Diels, *Fragmente der Vorsokratiker*. 5th ed. Cambridge, Mass.: Harvard University Press, 1948. For Fragments of Heraclitus, Philolaus, and Xenophanes.

Grene, David, and Richmond Lattimore, eds. *The Complete Greek Tragedies*. Chicago and London: University of Chicago Press, 1959. For the works of Aeschylus, Euripides, and Sophocles.

Hamilton, Edith, and Huntington Cairns, eds. *The Collected Dialogues of Plato*. Princeton, N.J.: Princeton University Press, 1963. For the dialogues (except *Protagoras*) of Plato. The C. C. W. Taylor translation (Oxford: Clarendon Press, 1976) was used for the *Protagoras*. For the [Pseudo-] Platonic *Eryxias*, B. Jowett's translation was used. *The Dialogues of Plato*, II. Oxford: Oxford University Press, 1871.

Herodotus. *The Histories*. Translated by Aubrey de Selincourt. Baltimore: Penguin Books, 1954.

Hesiod. *Hesiod*. Translated by Richmond Lattimore. Ann Arbor: University of Michigan Press, 1959.

Loeb Classical Library. For the works of Aristophanes, Demosthenes, Epic-

tetus, Homer, Diogenes Laertius, Lysias, Plutarch, Theognis, and Xenophon (with the exception of *Oeconomicus*, cited below).

Sprague, Rosamond Kent, ed. *The Older Sophists.* A translation of the 7th ed. of *Die Fragmente der Vorsokratiker*, ed. by H. Diels and W. Krantz. Berlin, 1951–54. For citations to Antiphon and Anonymus Iamblichi.

Pindar. *Victory Songs.* Translated by Frank J. Nisetich. Baltimore and London: Johns Hopkins University Press, 1980.

Thucydides. *The History of the Peloponnesian War.* Richard Crawley's translation revised by Richard Feetham and edited in translation by Sir Richard Livingstone. New York: Oxford University Press, 1960.

Xenophon. *Oeconomicus.* Translated by Leo Strauss. Ithaca, N.Y., and London: Cornell University Press, 1970. The Loeb Classical Library translations were used for the other cited works of Xenophon.

Introduction

The first discovery
of a science is
the discovery of itself.
—Joseph A. Schumpeter[1]

Throughout history, human beings have sought food, shelter, and clothing, the essential elements of physical survival. Confronting nature was man's first task. To bring the diverse phenomena of nature into understandable order, people came to construct paradigms or patterns through which to comprehend the physical world, casting nets upon the heavens, as John Donne so beautifully expressed the idea:

> . . . of Meridians and Parallels,
> Man hath weav'd out a net, and this net throwne
> Upon the Heavens, and now they are his owne[2]

These mental constructs or "nets" have pasts of their own, for human perception is a product not only of the physical faculties of observation but also of the cultural heritage used to structure observed reality.

We do not know at what point people began thinking abstractly about the process of providing for their economic needs, nor what "net" or grid was first cast upon the phenomena of nature to bring intelligible order out of chaos. But whenever it was that humans began to think reflectively, such an important matter as physical survival could hardly have escaped attention. Economic thought must therefore have a very long history, although much of it is obscured in the mists of time. Its fragments lie still embedded in the larger compass of human thinking.

For most of history, the economic process was not distinguished as a separate element of the total social fabric. The economy, so it has been said, was "embedded" in the larger system. The distinction (that is, the "disembedding" of the economy) may in fact be a perception—or an invention—of relatively recent times, precipitated by an accident of history and an ideological imperative.[3] Market activities which are now regarded as the distinguishing charac-

teristic of the economy were carried on *outside* the traditional economy of the feudal system, culminating in the great merchants' fairs of the Middle Ages. As a result, the body of law which had been developed within the structure of the manorial production system to deal with feudal tenures and obligations to the Crown at first lacked the conceptual framework to cope with the new commercial transactions associated with the growth of market activities.[4] The fact that the capitalist mode of production and the Industrial Revolution which it spawned originated in these peripheral activities made it easy for the "economy" to be perceived for the first time as a separate and virtually independent segment of the social system.

It was also congenial to the burgeoning commercial sector through the Middle Ages to claim immunity from the burdens imposed by the ponderous system of royal prerogative, although a formal defense of property rights *within* the system was, of course, necessary. The islands of quickening, exchange-oriented ferment were eventually surrounded and enclosed by national systems of legal definitions, but the claim that this special sphere should be left alone to function in terms of its own natural rationality gained wide acceptance.

That the conception of the economy as a disembedded element of the social system had not gained universal recognition by the latter part of the eighteenth century is illustrated by the fact that even Adam Smith, though a staunch advocate of freeing commerce from the restraints of royal regulation, still viewed political economy as a facet of jurisprudence. In the introduction to Book IV of the *Wealth of Nations*, Smith refers to political economy as "a branch of the science of a statesman or legislator."[5] Karl Pribram makes the administrative purpose of the *Wealth of Nations* clear. "It was not meant," he writes, "to be a textbook on economics, but rather was intended to teach legislators and statesmen such measures as would enable the people to provide plentiful revenue for themselves and to supply the commonwealth with a revenue sufficient for the public service."[6]

Although the markets and fairs that sprang up in the Middle Ages were frequently franchised by the Crown, they operated in their own arena relatively immune from intervention. In England and on the Continent, this transnational commercial realm came to be governed by its own legal code, the "Law Merchant," derived from Mediterranean commercial practices. "In the disturbed period which followed the fall of the Roman Empire," Holdsworth wrote, " church and state combined both to recognize that a special peace belonged to these markets, and to give them a special protection, which tended to differentiate their government and their law from that of the country at large."[7] Some of the markets were granted the right not only of taking the

"tolls of the market," of holding court, and of coining money, but even of excluding royal officials. These prerogatives came to be summed up in the term "ban royal." Moreover, in the interest of the preservation of the "peace of the market," legal technicalities were discarded in favor of procedures suitable to the exigencies of trade, and merchants, not lawyers, conducted the proceedings. Some statutes, Holdsworth notes, even prohibited the employment of lawyers except in certain cases.

Operating as a separate, private, and virtually autonomous legal structure into the eighteenth century, the Law Merchant provided further justification for the view that the economic sphere will be more efficient if left alone to operate in terms of its own natural rationality. The concept of the economy as a rational, perfectible, ideal system functioning with protomathematical rigor owes a debt to the Platonic concept of the ideal state; it was reinforced by the adoption of accounting practices which equilibrated with mathematical precision the data of commercial transactions.[8] Aristotle, as we shall see, specifically isolated commercial life motivated by profit from his ideal *polis*, and this perspective undoubtedly influenced scholastic perceptions of the commercial economy as a separate phenomenon in its own right. But, ironically, although Aristotle excluded profit-making activities from his *polis*, the very analytic concepts (i.e., rational self-interest and utility) which he used to explain productive relationships in the political economy of his city were later seized upon to analyze the commercial sector which was developing outside the social structure of medieval life. The inversion was thus complete: an analytic structure (*oikonomia*) used by Aristotle to explain the natural productive relationships of an agrarian *polis* in which the profit motive was rejected as a destabilizing element, was later superimposed upon the very activity which had been excluded, that is, the profit-making commercial process, carrying with it the name of economics.

As the commercial sector expanded, it fell to Adam Smith to describe the inner workings of this apparently self-regulating system which he thought would guide the human element as if by an "invisible hand" toward the unintended common good. It is of some interest that Smith's inaugural lecture for his chair in logic and metaphysics at the University of Glasgow contained an extended discussion of Plato's theory of the Ideas[9] and that he was an assiduous reader of the ancient Greek playwrights. William R. Scott maintained that the data Smith obtained from Greek literature "constituted an essential and fundamental element in the establishing of several of his central positions" and that the Greek authorities "in fact constitute, not alone the starting point in documentation, but the foundation of the whole."[10] In the *Theory of Moral Sentiments* (VII.ii.1), Smith compared the doctrines of the ancient

philosophers favorably with "the desponding, plaintive, and whining tone of some modern systems." But he was fated to be remembered more as the father of political economy than as a moral philosopher.

Smith's *Wealth of Nations* received such wide acclaim that it has tended to obscure the foundations upon which he built, and it has been common practice to ignore his predecessors. In fact, it has been observed that for a long time "it was convenient to pretend that the subject [political economy] had been invented by Adam Smith in 1776, a convention that saved subsequent economists (and their students) a good deal of work."[11] This has been true even though it has been recognized that the *Wealth of Nations*, rather than representing a new and unique economic analysis, is an example primarily of the synthesizing of a long history of economic ideas into a coherent analysis of the economic process.

Ideas, George Boas observed, "are quicksilver in the way they roll about and turn up in places logic would never have pushed them."[12] This seems to be particularly true of economic ideas which, as economists know, sometimes persist considerably longer than the problems that provoked them, giving rise to J. M. Keynes's famous observation that "the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back." He added, "I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas."[13]

We delude ourselves if we do not recognize a similar bondage to the ancient Greeks. "Even those who have no acquaintance with the doctrines and writings of the great masters of antiquity, and who have not even heard the names of Plato and Aristotle," Theodor Gomperz wrote, "are, nevertheless, under the spell of their authority. It is not only that their influence is often transmitted to us by their followers, ancient and modern: our whole mode of thinking, the categories in which our ideas move, the forms of language in which we express them, and which therefore govern our ideas,—all these are to no small extent the products of art, in large measure the art of the great thinkers of antiquity." "A thorough comprehension of these origins," he warned, "is indispensable if we are to escape from the overpowering despotism of their influence."[14]

Aristotelian studies, which had been revived in the scholastic period, by Adam Smith's day had become less pervasive, although, as has been noted,

the Greek classics were a formative factor in Smith's writings. This ancient literature exercised an equally powerful hold on Karl Marx, the other great synthesizer who helped mold modern economic thought.[15] As classical studies began to lose their preeminent status, general consciousness of the decisive and formative role of Greek ideas in shaping Western thought began to recede, although we have never been—and perhaps never shall be—free of the Greeks. Unseen and unacknowledged, the ancient Greeks reach through the works of writers such as Smith and Marx to cast their spell on succeeding generations. The tide of intellectual ferment that swept over the Western world from an ancient and unique civilization has now become a slow eddy in Western consciousness, but it is still invisibly shaping and channeling the ideas even of those who, as Gomperz observed, have never "heard the names of Plato and Aristotle," because, although few any longer read the ancient texts, they still read the works of those who, like Smith and Marx, *did* read them and came under their spell. In the spirit of the observation that "disciplines are intellectual conveniences, not sovereign states,"[16] this study will explore some of the ancient Greek ideas which were drawn on in the development of economic thought.

Classicists and economic historians have long argued about the nature of the ancient Greek economy and about the applicability (or nonapplicability) of modern economic theory to its structure, but few have taken the trouble to study the economic *ideas* of the Greeks. Even when attempts have been made to identify Greek economic ideas, they have often been inferred from what is known about the ancient economy from material artifacts rather than from analyses of what the Greeks had to say of economic significance. M. I. Finley noted that "perhaps no other aspect of the language of the ancient Greeks has remained so unexplored as its economic terminology,"[17] although Claude Mossé suggested in 1962 that a systematic study of Greek economic thought would be an important contribution to a better understanding of the nature of the ancient economy.[18] Summing up the situation, Alan E. Samuel wrote, "In general we have not bothered to find or reconstruct ancient theory, but have attempted to work with the realia to create a description of the workings of the economy without feeling much need to test the descriptions against ancient theory or ancient perceptions."[19] This situation has resulted in the division of ancient economic historians, economic anthropologists, and others concerned with the study of the ancient economy into two opposing camps with conflicting orientations. One side is represented by M. Rostovtzeff's view that modern economies differ from the ancient "only in quantity and not in quality"[20] and thus that modern economic theory is applicable to ancient economic conditions. The opposing view, represented by M. I. Finley, is that the

ancient Greek economy and ancient Greek perceptions of economic factors were so vastly different from current economic phenomena and perceptions as to be virtually irrelevant to each other.[21]

The evidence examined in the present study suggests that perhaps inappropriate questions are being asked and that, rather than arguing about the similarities or dissimilarities between the ancient and modern economies and/or the relevance of modern economic theory to ancient conditions, the more fruitful approach is to look first at Greek writings, rather than at their economy, for the answer to the more significant question that has so far been left unasked: What did the Greeks have to say of economic significance and what influence did their ideas have on the development of subsequent economic theory?

Unfortunately, scholars who have looked to neoclassical market theory and classical production theory for guidance on ancient economic questions have not always been well served, for the ancients did not discuss their economic concerns in terms of market processes nor, generally, in terms of growth and development. Thus, instead of treatises on price and production theory, scholars have found in the ancient literature mostly concern for self-sufficiency and stability and even recommendations of limit, not only on population size but also on consumption and money-making activities. There has been disagreement about whether the Greeks even had a concept of "progress," a notion inherent in the common modern habit of assuming economic growth to be a desirable social goal but one that has recently been put into question by those who maintain that it is incompatible with the recognition that resources are finite. Finding little in ancient literature of relevance to modern economic concerns and failing to appreciate that what the Greeks wrote possibly had relevance to their own very different goals if not to modern ones, some have concluded that the Greeks were simply uninterested in economic matters.

The few economists who have been familiar with the classics, such as Adam Smith, Karl Marx, Nassau Senior, Henry Sidgwick, John K. Ingram, and Philip Wicksteed, have appreciated the significance and relevance of ancient Greek thought to economics. But most later economists, trained in the precepts of a market-oriented economic theory which was forged in the ideological milieu of eighteenth- and nineteenth-century capitalism, have been as confined as the classicists within disciplinary walls. Further, the lack of interest in the Greek material is the result of a general decline of interest within the discipline in the past few decades in the history of economic thought itself. Young economists are being trained as technicians with little understanding of the history or broader methodological and philosophical aspects of their field, and the history of economic thought has come to be regarded in some quar-

ters as a highly dispensable academic pursuit. The general denigration of the value of historical perspectives to the practice of modern "scientific" economics has led some historians of economic thought to allude to their work with a touch of either bitterness or humor. One reported a general perception of the field as "a slightly depraved entertainment, fit only for people who really like medieval Latin,"[22] while another defended it as at least "good, clean fun."[23] "When the world is messy," one economist has observed, "you fall back either on ideology or technique. Good young people respond to the seductions of technique. It's independent of experience, and you don't have to know much."[24]

Then, too, economists have been somewhat imprecise about defining their field. And, unlike some of the scientific disciplines with which some economists would aspire to class their own, there has never been a time when the discrepancies between formal definitions of the scope of the "science" and the reality to which its methodology has been applied have not been challenged by dissenters from both within and without.[25] The nihilistic barbs of Thorstein Veblen are still a reminder to economists that the subject matter of their discipline is deeply enmeshed in a complex institutional fabric. Despite the reliance of some of its practitioners upon carefully contrived theories of rational self-interest, economics must also contend with such imponderables as conspicuous consumption, the proliferation of trivial products, and ostentatious display—the "economic psychopathology of our daily lives," Heilbroner termed it.[26]

Definitions of economics vary from the conception of it as the study of self-regulating, price-forming market processes, to the study of unlimited human wants impinging upon scarce physical resources (a slight simplification of Aristotle's theory), to the value-free, abstract study of the maximization of efficiency in *any* given set of relationships. Were the definition of economics restricted to the first one, the economics in which more than half the present population of the world lives would lie outside its purview. The last one, it will be noted, asserts the efficacy of economic theory as an appropriate system of analysis for *all* facets of life, thus essentially re-embedding economics into the larger intellectual fabric, but with the added assumption of a very specific and restricted concept of human decision making based solely on premises of maximization.[27] A glance at the list of course offerings at any modern university will confirm the fact that economic theory is in fact being applied not only to thoroughly mixed economies with heavy commitments to administrative structures, both governmental and corporate, but also to the economic problems of less developed countries struggling to adapt non-European institutional backgrounds to modern technological developments. One can only conclude

that the proliferation of modern economic concerns has far outstripped the conventional definitions of the field.

Reflecting this disarray, G. L. S. Shackle described economics as "the science which, of all scholarly disciplines, most recklessly oversteps the gulf between the humanities and the physical sciences." "Economics," he adds, "has veritably turned imprecision itself into a science: economics, the science of the quantification of the unquantifiable and the aggregation of the incompatible. It has followed this road at so violent a gallop, that much which is of significance and influence has been trampled on, much territory has been claimed that cannot be held."[28] Shackle's own definition of economics as the study of "the activity of exchange" and his observation that economics "might almost be defined as the art of reducing incommensurables to common terms"[29] comes close to Aristotle's approach to justice in exchange.

The connections between modern economic theory and its ancient origins may have been part of what has been trampled upon, for there is little recognition today among economists of any relevance of ancient Greek ideas to their discipline. This is not entirely surprising since, as noted by Mark Blaug, "the history of economics is not so much the chronicle of a continuous accumulation of theoretical achievements as the story of exaggerated intellectual revolutions in which truths already known are neglected in favor of new revelations."[30] Economists are, however, increasingly concerned with fringe areas where what would formerly have been specifically designated as "economic" pursuits overlap with legal and social processes. It was in terms of such broader perspectives that the ancient Greeks developed many of the analytic formulations that were eventually embraced by economic theory. The principles of rational self-interest, of the hedonic measurement of choice, of subjective individualism, and of efficiency in terms of defined objectives are all concepts developed and applied by the ancient Greeks to facets of their culture. They are still the "nets being cast upon the heavens" in our day to interpret observed reality. Such nets or grids pressed upon the chaotic phenomena of the economic process are simplifying and organizing abstractions which help us to ignore the discrepancies and to isolate the elements significant for economic analysis. Recovering their "archaeological past" may give us fresh insights about their validity in structuring current data.

This study makes no claim that the economy of the ancient Greeks was a small replica of a modern industrial one or even that it was particularly similar, nor that the ancient Greeks developed a price theory or had a definite conception of a market process. Religious, cultural, and other social and political concerns were far more important to them than economic ones. Frank H. Knight's observation that "there is no more important prerequisite to clear

thinking in regard to economics itself than is recognition of its limited place among human interests at large"[31] was probably more true of the ancient Greeks than of us. They did not even see economic factors as in any way separable from the larger matrix of social life. But they *did* have an economy, even commercial exchange on a large scale at entrepôts such as Athens and Corinth. And they *did* develop analytic structures which have significance for economic theory.

A practical people, the ancient Greeks largely took the physical world as a given, to be manipulated if possible, but, if not, then to be contended with as one could. The variable that human beings could do something about, they felt, was man himself, including others over whom one had control.[32] It was, after all, a slave society where some human beings were regarded as chattels or "living tools." This Greek conception of the malleability and management of human capacities for the achievement of stated objectives is the seed from which the dual traditions of the entrepreneurial rationalization of profit and the labor theory of value germinated. It is a vastly different conceptual approach from the Physiocratic reliance upon the bounty of nature for the genesis of wealth.

The aim of this study is to survey ancient Greek ideas which in some way influenced economic thought. This is an important first step to a systematic study of Greek influences on later writers and for philological studies of linguistic nuances in the literature. Although the ancients used many of the concepts examined here in completely noneconomic contexts, they were later adapted to explain economic phenomena. The way these ideas have been perceived—and some have surely been misperceived—is still the substance of their importance from the point of view of intellectual history.

In Part One, the administrative tradition in ancient Greece is examined as a source of some of the analytic forms that have generally been thought to be abstractions from the market process. This may be a more useful general approach to the study of precapitalist economic ideas than attempting to explain primitive economic activities with modern market theory, and I believe that one of the major contributions of this work is the separation of the administrative perspective from exchange and market analysis as a basis for studying ancient—as well as modern—decision-making and efficiency criteria. The doling out of rations by an administrative bureaucracy and the formulation of rules for the distribution of booty in warfare according to some regular pattern seem to have provided the basis for early rational quantitative generalization as well as hedonic and ethical justifications for the division of shares.

In Chapter I, the emergence of administrative rationality, survival, and

moral status as the primary measures of effectiveness or success in the patriarchal household are examined as progenitors of an efficiency concept.

The evolution and maturation of concepts of choice and comparison into a formal statement of the hedonic calculus are developed in Chapter II.

Xenophon's systematic though descriptive account of the rudiments of administrative effectiveness, replete with insights into principles of successful leadership and motivation in military and agricultural activities, are covered in Chapter III. His writings show an awareness that alternative uses of resources and foregone courses of action involve opportunity costs, and that mental calculations of subjective use value can be made in the context of administrative or bureaucratic processes by shuffling choices to achieve optimum combinations. His was a view which emphasized the power of individuals to assert dominance over the elements essential for personal and public well-being, an eminently practical and "economic" perspective. In Xenophon's writings are found some of the few instances in Greek literature of discussions oriented toward economic "production" or increasing returns from given resources. His perspective, however, is administrative rather than market-oriented.

In Chapter IV, Plato's rationalism is examined from the point of view of his quantitative treatment of excellence, individualism, and "natural" interactions between individuals with differing capacities as the bases for a theoretically perfectible political economy. Plato systematically rejected any possibility of a self-regulating mechanism that could successfully guide a society and, instead, advanced ethical individualism as a means of imposing order. This explains why his emphasis is on the administration of the social organization by properly trained, outstanding individuals rather than on self-directing political processes in the achievement of an efficient and happy society. His model of a stable, self-sufficient social order based on the imperatives of natural capacities and efficiency, directed by an ethical leader with arbitrary power who has an intuitive grasp of the "ideal" or "pure" theoretic Form, is a set piece for latter day academic theorists spinning models of abstract perfection while waiting to be called by the bumbling and unappreciative politicians presiding over the halls of real political power. For Plato, the best political economy or social arrangement was a matter of fact discernible by moral insight and "right reason," not a matter of public opinion or choice, and this is why he is here described as the theologian of the administrative tradition.

Part Two, Chapters V through VIII, separates the concern with administrative efficiency from the theme of ongoing participative processes.

Chapter V examines Homeric literature from a new perspective. The *Iliad* and the *Odyssey* are not only great literature, they are also epics which reflect

the strategic overviews of an ancient people and their tactical treatment of specific problems. They introduce us to ancient ideas about the organization and authority requisite for the success of military expeditions in search of booty which later became habitual assumptions for generalizing and defining the proper structure and purposes of community life. The tactical or technical systems developed for distribution of the proceeds of the hunt and the booty of war influenced rationalizations about the proper rules for barter and exchange and were the antecedents of later notions about participative public process and the resolution of disputes.

Chapter VI develops Protagoras's relativistic theory of participative public process that has a striking resemblance to modern notions of the market system as a value-free mechanism for equilibrating rational, subjective choice. It further discusses Aristotle's examination in the *Rhetoric* of the elements of choice appropriate to public decision making.

In Chapter VII, Aristotle's treatment of two-party transactions in Book V of his *Ethics* is analyzed in terms of subjective mutuality in isolated exchange. This famous passage, with a jurisprudential and political (rather than market) orientation, was the basis for scholastic treatments of just price and value.

Chapter VIII appraises Aristotle's macropolitical economy and his view of the *oikos* and *polis* as expressions of natural and rational values in a desirable society. It was this overview, along with his monetary and demand theory, which helped frame the later concept of political economy, although emphasis in modern thought has been transferred to commercial elements which Aristotle considered external to his agricultural *polis*. He emphasized production for use and condemned money-making activities unrelated to such needs as lacking a proper limit. He saw in "unnecessary" or "unlimited" exchange a threat to the stability of his largely self-sufficient *polis*, which he thought would best serve the end of human happiness or welfare.

PART ONE

THE ADMINISTRATIVE TRADITION IN ANCIENT THOUGHT

I The Emergence of Administrative Rationality

Once we begin to rely upon our reason . . . we cannot return to a state of implicit submission to tribal magic. For those who have eaten of the tree of knowledge, paradise is lost.

—K. R. Popper[1]

The eastern Mediterranean basin was a focal point for cultural ferment during two thousand years before the Christian era. To trace the development of early Greek ideas, we must look first at some of the major currents of thought which influenced the leaders of the thriving little communities on the islands and coasts of the Aegean where a civilization flowered, so uniquely articulate that it has had a dominant influence on all later Western thought. There has been a tendency to think of Greek culture as existing almost in a historic and geographic vacuum, as if it flashed like a blazing meteorite into the atmosphere from some celestial source. Athene, the patron goddess of Athens, sprang full grown from Zeus's head, but this is only mythology; human culture springs from more prosaic sources, generally from the stimulus of other cultural contacts.

The relative abundance of the surviving literature from ancient Greece has tended to make us forget that a few hundred miles across a sea furrowed by the wakes of many trading galleys lay the Egyptian Empire.[2] This complicatedly structured society was responsible for some of the most massive construction feats of history, projects which required the administrative supervision of vast numbers of people and quantities of materials some two thousand years before the blossoming of classical Greek culture. The Egyptian civilization had begun to accumulate a written tradition over two and a half millennia before the Age of Pericles. Its system of writing evolved through the Phoenicians to provide the basis for the Greek alphabet.

It would be strange indeed if the great river basin civilizations of antiquity had not had a significant and persisting effect on any people within their spheres of influence. There is, of course, Herodotus's observation (II.48) that the Greeks received the names of their gods from the Egyptians, as well as the tradition that Thales and Solon traveled in Egypt. Both Plato and Aristotle, as

noted by the Woods,[3] were familiar with Egyptian social organization. Although the famous "theorem of Pythagoras" (that the sum of the squares of the sides of a right triangle is equal to the square of the hypotenuse) has been given a Greek genesis, the Egyptians had been using the 3, 4, 5 right triangle for laying out square corners for centuries. Moreover, the Babylonians have left us a clay tablet dating from some twelve centuries before Pythagoras in which the hypotenuse of a right triangle, the diagonal of a square, is specifically calculated to five decimal places.[4] Over a thousand years after the Mesopotamian civilization developed its sexagesimal system of numbers based on 60, this mathematical pattern still framed the ratio in Greek money of the *mina* to the *talent*, and persists in our breakdown of degrees and hours into minutes and seconds.

One of the most picturesque symbols of jurisprudential and administrative authority in the writings of Plato, the characterization of the king or ruler as a shepherd (*Statesm.* 275; *Laws* 713d), reflects a common Egyptian and Near Eastern heritage. In the Egyptian and Babylonian worlds, the tradition of nomadic herdsmen conquering and assimilating the cultures of sedentary agricultural societies had long supported the image of the ruler as shepherd of his people, with the shepherd's crook or staff one of the earliest symbols of authority. An Egyptian Pharaoh justifying his divine appointment claimed, "He (God) made me the herdsman of this land, for he discerned that I would keep it in order for him; he entrusted to me that which he protected."[5] Hammurabi's characterization of himself as the shepherd of his people in his famous laws in the eighteenth century B.C. and the picture of benevolent authoritarianism portrayed in the Twenty-third Psalm illustrate the ubiquity of the shepherd-king image. In Greek literature, there had been expressions of the theme of the gentle shepherd as ruler as far back as the *Odyssey*, somewhat in contrast to the Greek tradition of horse-taming, cattle-stealing heroes.

Another important symbol was that of the balance, which apparently evolved from administrative practices into a religious symbol for the weighing of souls, and appears in the Egyptian *Coffin Texts* and the *Book of the Dead* in the second millennium B.C.[6] The goddess of truth, Maat, was traditionally shown presiding over the postmortem judgment weighing the souls of the dead against a feather. As early as the *Instruction for King Meri-ka-re* (before 2,000 B.C.), it was suggested that in the final inquest, regardless of whether accusers came forward to denounce a man or whether he himself could refute accusations, his actual deeds "would be laid in heaps before him."[7]

This precise measuring device, the balance, which provided the ultimate rational assessment of one's deeds, matured into a symbol of the final inquest to which an individual (or an official) was subjected at the end of his tour of

duty or life on earth. S. G. F. Brandon summarized the significance of the symbolism of the scale: "The process of weighing appears to be more than a metaphor for making an assessment . . . the essence of the concept lies in the fact that such a means of assessment is impersonal and automatic. Unless its movement is interfered with, a balance will inevitably indicate the comparative weights of what is set in each of its scale-pans. . . . Accordingly, we are justified in concluding that, however potent may have been the tendency to magic, the Egyptians had come to conceive of the post mortem judgment as a transaction that was inevitable and automatic in its operation, and from which there could be no appeal or escape."[8]

The balance does not appear to reflect a development of commercial life in Egypt. More likely, it was a symbol of measured tax collections and judicial accounting in which officials were required to submit to an inventory of goods entrusted to their care in this aggregative and distributive economy.[9] It represented uniformity in measurement, not equality between goods or between the rights of contending parties. The balance cannot establish value; it can only measure quantities against a fixed standard. It cannot function to equate value in barter. For example, there would be no point in weighing a cowhide against, say, a bushel of grain. Their relative values would have little relation to their relative weights. Only when a standard is set, either administratively or by joint agreement, and the weights of similar items compared against this common standard, does the balance have a function. Thus, in barter or in isolated exchange, the precision of the balance would have little importance unless some accounting system were being followed or close comparisons being made. Prior to the balance being associated with the weighing of precious metals before the widespread use of coined money, it had functioned as an administratively established or customarily accepted standard reference for uniform comparison in the levying of taxes and rents. The use of the balance provided an impersonal measure of administratively fixed quantities. It did not imply *equal* treatment, but only *consistent* treatment.

The Balance as a Symbol of Justice in the Greek Tradition

One of the earliest and most vivid uses of the symbolism of the balance in ancient Greek literature is in the *Iliad*, where Zeus appraises the prospects of Hector and Achilles before a battle: "The Father lifted on high his golden scales, and set therein two fates of grievous death, one for Achilles, and one for horse-taming Hector; then he grasped the balance by the midst and raised it; and down sank the day of doom of Hector" (XXII.210).[10] The use of scales in this situation makes no sense as either a distributive measurement of allot-

ments or as a judicial symbol in a traditional ruling because no constant or standard is hung in the balance. It is at most a comparison between two unique quantities of the same substance compared in isolation. However, the symbol was pictured on a vase from Enkomi (Salamis) which Nilsson identified as Cypro-Mycenaean, c. 1300 B.C. The picture on the vase shows a man with scales in his hands before two figures in a chariot. The man with the scales, according to Nilsson, "can be but Zeus taking the scales of destiny in order to determine the fate of the combatants."[11] Sir Arthur Evans, however, identifies the vase as Cypro-Minoan and considers the figure with the scales, not Zeus, but an image representing stewardship or the economic side of life, counterposed to another representing the military aspect.[12] Theognis (XL. 151–58), too, referred to Zeus's balance being used for the dispensation of "riches and indigence" to mankind.

The widely accepted Egyptian influence on ancient Crete[13] may have been evidenced in the Cretan origin of the traditional Greek judges of the underworld, Rhadamanthys, Aeacus, and Minos. Minos, who served in an appellate capacity, is often described as using his scales. Judgments as to life after death were formerly rendered by men on earth but, according to the account in the *Gorgias* (523c ff.), Zeus, on being informed that the judging process was not achieving pure justice, decided to remove the corrupting influences of status and rhetoric by deferring the judgments until after death when souls were stripped naked and appraised by the dead souls of Rhadamanthys, Aeacus, and Minos. Rhadamanthys and Aeacus are pictured as giving sentences "staff in hand," while Minos "alone bears a scepter of gold." The determination of one's fate was therefore reached by an imposed, abstract, formal process of decision making parallel to the image of the comparison of fates in Zeus's golden scales.

The image of a female figure presiding over the scales of justice, earlier represented by the Egyptian goddess Maat, was symbolized in ancient Greece by the goddess Dike, also holding scales. By the Renaissance, as noted by K. R. Popper,[14] the female figure with the scales (for "distributing equality" or "balancing the claims and interests of the contesting individuals") had become blindfolded (symbolizing a disregard for the suppliant's station).

The Pythagoreans associated justice with the number 4 and with the geometric figure, the square. There is reason to believe that the association of the concept of justice with the square, a four-sided figure with right angles, is derived from the right angle formed by the arms of the balance with the plumb line which symbolized precise measurement in administrative distributions, tax collections, and investigations of embezzlement by stewards entrusted with measured quantities of goods. In the use of a scale in such measure-

ments, the questions "Are the arms of the balance *on the level*?" and "Are they *square* with the plumb line?" may have been repeated so often as to become maxims.

The balance is the fundamental image behind the concept of the equation in mathematics (as well as the balance sheet in accounting), and it has persisted as a symbol of justice to this day, representing the requirement of the administration of a uniform standard of measurement for all.

The Administrative Tradition and Athenian Public Finance

The empires that bracketed the eastern Mediterranean basin for twenty-five hundred years before the emergence of classical Greek culture—the Egyptian, Babylonian, Hittite, Syrian, and Persian—were large-scale organizations with extensive aggregative-distributive functions, gathering vast quantities of resources in the form of metals, foodstuffs, military hardware, and labor, and allocating these resources to both military operations and nonmilitary construction projects. The systems of record keeping and internal control for the prevention of corruption used by these bureaucracies were not the prime stuff of our literary record, but the importance of such documents is attested by the high percentage of the surviving written material dealing with inventory and receipt of goods.[15]

By contrast, the early Greek system of public finance before the sixth century B.C. was quite simple. In an economy based primarily upon subsistence agriculture and limited palace trade, with handicrafts supervised in the halls of chieftains and large landholders, the role of the state, insofar as a state could be said to exist, was only as a focal point for religious and military activities. Public offices were honorary, armies were made up of male citizens who supplied their own weapons, and public festivals were financed by the wealthy as semi-obligatory gestures of magnanimity. Thus, with few public expenses, there was little need for a system of internal taxation and public accounting. The *polis* as a participative, decision-making body was a vital aspect of Greek life, but its financial and administrative role seems to have been limited. Andreades suggests that the sale of hides from the temple sacrifices was one of the most important sources of public revenue in Athens before the time of Solon. According to him, the "daily expenses of administration" included only "some slight public works, rewards for the destruction of wolves, gifts for poets and physicians, and above all offerings and sacrifices to the local or Pan-Hellenic divinities."[16]

Although the revenues administered by the state were minimal, Solon's reform at the beginning of the sixth century B.C. which in effect substituted

wealth for birth as a qualification for office gives us a glimpse of one ancient view of wealth based on flow of income rather than capital. For purposes of determining qualification for holding certain offices, the citizen body was divided into four classes, with gradations in income from land correlated with the right to hold office. According to A. Andrewes, this classification was an archaic feature "unparalleled in later Athens which took only capital into account."[17] The fact that such a system would have required administrative criteria for applying the "wet" and "dry" measures of produce may indicate that it was borrowed from a more complex administrative economy, but the later emphasis on capital as wealth should not obscure this earlier focus on revenue.

The temple as treasury was the financial heart of the economy in the Mesopotamian tradition, and this pattern also appeared in Hellenic times, as illustrated by the financial power of the Olympian and Delphic temples and by the use of the temple as the treasury of the Delian League when the communities of the Aegean allied themselves under Athenian leadership to defend against the Persian threat.[18] Andreades observed that "in classical times the only 'great capitalists' were the Pan-Hellenic shrines at Delphi and Olympia, and the greatest cities, particularly Athens."[19] The treasury of the Delian League was later (in 454 B.C.) moved to Athens and placed in the Temple of Athene, where it was held somewhat immune from the extravagances of the Athenian populace, who were inclined to treat public assets such as the silver from the mines at Laurium as tribal surpluses available for immediate distribution among the citizenry. The surpluses could be removed from the treasury of Athene only in the form of a loan. According to Andreades, "This procedure, which has surprised many, was prompted by political prudence; the difficulty does not really lie in the forming of a treasury but in the moderate use of it, and particularly in its maintenance or preservation; the Athenians, as if defending themselves against themselves through the intervention of the goddess, placed obstacles in the way of a wasting of the surpluses and obligated themselves to a restoration of the sums spent."[20] This, however, did not prevent Pericles from embarking on extensive public construction programs.

From this background of a limited, almost villagelike financial organization, Athens in the sixth century B.C. experienced the centralized rules of Solon and the Pisistratidai as she adjusted to a new commercial role. It was at this period that tyrannies appeared throughout the Aegean world[21] and may have led to the implementation of administrative practices borrowed from the Persian and Egyptian empires. In the fifth century, Athens suddenly emerged as the entrepôt and naval leader of the Aegean and as the tribute-gathering head of an alliance against Persia.

After Themistocles, in 483 B.C., successfully promoted a public commit-

ment to building the largest fleet in Greek history, Athens entered a new era characterized by an "anxiety about public finance," as Andreades termed it. His description of the new conditions contrasts sharply with the earlier situation described above: "Their enterprising and costly foreign policy, combined with the principle of paying nearly all their citizens a salary, and furthermore their frequent religious festivals and their building of costly temples led to a failure to balance the internal revenues and the state expenses. . . . The 'need of money' . . . had become a lasting situation."[22] Andreades' thesis is that Athens under Pericles had embarked upon an economic and political career that made her dependent on foreign grain and shipbuilding materials. This was compounded by the relative poverty of her soil and the limited amount of good grain-producing land upon which to base a large population. This burden of resource scarcity placed a premium upon careful accounting and strict measures to control inefficiency and corruption.

The systems of administrative control and taxation adopted at this period in Athens were in response to this continuing "need for money." Aristotle described the procedure for calling magistrates to account in his *Constitution of Athens* (48.4–5). Both monthly and annual audits were made of the funds controlled by public officials. The "herald of the accountants" invited any citizen to attend who wished to bring accusations against dishonest officials, and "special officers [were] appointed to evaluate the accusations inscribed on the white board." Andreades cites three factors as proof of the interest of the Athenians in a sound financial policy at this period: their special attention to matters of currency; the better organization of the revenues, especially the provisions covering extraordinary expenses; and the "strict attention to the keeping of the public accounts," which he describes as "essentially a 'budget.'" This institution, he observes, went "through progressive improvements" and reached "a degree of perfection which the great nations of western Europe did not apparently attain until the 19th century."[23] This system of control was supplemented by a "strict examination" at the end of an official's term of office in which "receipts [were] presented and expenditure justified before the auditors."[24] This is reminiscent of the Egyptian administrative tradition stereotyped in the judgment of the dead, complete with the formal encouragement of accusers to assure thoroughness of the examination.

The institution of formal accounting procedures, including careful inventory and documentation of acquisitions and disbursements, produced a sense of rational efficiency as a basis for administrative economics.[25] This pattern had its equivalent expression in the administration of the private affairs of the leading citizen of the period. Plutarch described Pericles' household management system which was adopted to protect his patrimony and yet not

"cause him much trouble and loss of time when he was busy with higher things." His system was to sell his "annual products all together in the lump, and then to buy in the market each article as it was needed." This procedure, administered by one trusted servant, prevented the accumulation of surpluses that might be wasted, with "every outlay and every intake proceeding by count and measure."[26]

The development of new systems of administrative controls in Athens was greatly facilitated by the use of coined money.[27] The systematic weighing of precious metals as well as other commodities had always been necessary for the protection of stores of value accumulated by rulers or temples. Careful and precise mechanisms for such rational accounting systems had existed for two thousand years before the invention of coinage, and this weighing process had sufficed for the use of precious metals as a convenient medium of exchange in large-scale international trade. Therefore, the development of coined money in Lydia shortly before 600 B.C. and its rapid adoption by the city states in the Aegean cannot be explained as a result of its requirement in commerce. As Oswyn Murray points out, the early denominations were too large for use in retail trade.[28] He agrees with others who believe that the original function of coinage was as a unit of accounting in an administrative context rather than as a medium of exchange. One suggestion is that coinage "was originally devised by the Lydians in order to enable the king to pay out regular sums to large bodies of men in receipt of standard amounts; and its swift acceptance in Greece is due to the fact that these men were Greek mercenary soldiers."[29]

Administrative Order as a Source of Rationality

The rational processes engendered by the necessities of administrative order have received little attention as sources of patterns important to science as well as to political economy. Whether heads of families, tribes, or empires, those who direct administrative processes require rational procedures for the performance of the aggregative and distributive functions necessary for the maintenance of order. From the administrative necessity to treat large numbers of elements in terms of some common denominator, whether as weights, measures, or, in the case of people, as abstract numerical entities, first arose the emphasis upon precise standards of weights and measures. The wide dissemination of these standardized systems in the eastern Mediterranean and the Near East in ancient times suggests a general recognition of the importance of common bases for measurement to facilitate both internal control and expanding international trade. The internal rationality of the various sys-

tems of weights must have contributed to a sense of the need for a minimum unit, a common denominator in terms of which anything could be measured. Of particular interest to economists is John Maynard Keynes's long and only recently published essay on ancient monetary structures and his discussion of wheat and barley grains as the monads ("atomic units") of ancient rational systems of weights and measures.[30] Pythagoras, we are told, was inspired to think of his basic philosophical premise—that all things can be represented by number, or, more mystically, that all things in fact *are* number—from seeing prices associated with goods being exchanged.[31] The idea of number in arithmetic being based on the number 1; figures in geometry being based on the point (and its extension into lines, planes, and solids); and matter in physics being based on the atomic particle are all corollaries of the concept that everything can be defined in terms of a basic unit. This idea, together with the consciousness of the administered economy as an essentially closed system, must have had its role in creating or at least contributing to an atmosphere congenial to the development of the materialist atomism articulated by Leucippus and Democritus; to the scientific and philosophical branches of Pythagorean number mysticism and mathematics; and to the theories of interacting natural systems with an underlying basic element developed by the Ionian nature philosophers, Thales, Anaximander, and Anaximenes. While the mathematical sophistication of the Aegean was probably only a pale reflection of the highly developed competencies of the Babylonians and the Egyptians, the Greeks in the sixth and fifth centuries B.C. seemed to have exhibited a vivacious though primitive imagery in absorbing learning from abroad; this opened the way to more flexible theoretical perspectives.[32]

The necessities of administrative order also resulted in the vesting of authority in a ruler or administrator and in two different concepts of "individualism" which we may distinguish as bureaucratic individualism and patriarchal individualism. The first results from the exigencies of the administrative process itself in the contact between a bureaucracy and the population subject to its regulation. The uniform application of bureaucratic procedures requires the recognition of individuals as relatively equal units to which rules can be applied. The second, represented by the authority of the patriarchal leader, is a kind of microcosm of the larger political unit of tribe or empire and thus of the larger bureaucracy, but here the concept of individualism is focused, not on the individuals ruled by the patriarch, but on the patriarch himself. Bureaucratic individualism is represented by the base of the pyramid, while patriarchal individualism is represented by its apex.

Bureaucratic Individualism

The functioning of an administrative bureaucracy in its dealings with large numbers of people, for example in the collection or disbursement of revenues or goods, requires the development of systematic procedures for the impersonal delegation of authority. The only efficient way to make disbursements to work forces or military personnel who must receive calculated quantities of supplies—foodstuffs, materials, and/or payment—is to generalize the individuals as equal units to be allotted specific rations. Only in this way can supplies be efficiently acquired, distributed for use or compensation, and the conduct of supervisors regulated. This process thus creates a form of individualism—bureaucratic individualism—because the system necessitates the uniform treatment of individuals in order to achieve the objectives of the centralized administrative authority. In the *Odyssey* (IV.691), Penelope refers to this uniformity of treatment when she remarks that Odysseus treated everyone alike, whether he liked them or not, "as the wont is of divine kings." Bureaucratic individualism may give rise to certain expectations on the part of subjects, but these are different kinds of expectations from those associated with modern concepts of personal rights.[33] It is significant that the Greek term *nomos*, which came to mean law by custom, was derived from a word meaning "to apportion, distribute or dispense."[34]

Herodotus (II.109–10) gave an illustration of a formalized collection process which resulted in bureaucratic individualism when he reported that the Egyptians attributed to their ancient ruler, Sesostris, the dividing of the farmland of the Nile into equal squares and the levying of fixed rents upon it (a tax paid out of the produce of the land). If any part of a man's land was taken by the river, or damaged, he could "go and declare his loss before the king, who would send inspectors to measure the extent of the loss, in order that he might pay in future a fair proportion of the tax at which his property had been assessed." Herodotus added, "Perhaps this was the way in which geometry was invented, and passed afterwards into Greece."

This system of levying a fixed rent in kind in a country where agriculture is dependent upon floodplain irrigation and therefore has highly predictable yields results in a tax system in which justice is based on the fair measurement of the fixed levy, symbolized by the level bushel or the balance. In the interest of administrative order, all individuals must receive equal treatment. The process itself provides the data needed by the administrative authority: the extent of the land area, the levy, and therefore the quantities of produce that should go into the royal granaries. In such an administrative system, justice becomes tied to a sense of rational expectations and the anticipation of equal treat-

ment. This is not to say that individuals had rights or even necessarily received good treatment at the hands of self-deifying rulers, but the uniformity in the treatment of individuals engendered by administrative requirements did result in a kind of individualism, bureaucratic though it may have been in origin and in practice. The Book of Job is a striking illustration of an individual fervently striving to fulfill his obligation of duty to his superior with no assertable right to any given standard of treatment.[35] He may suffer frustrated expectations, but the ideal subject has no assertable *right against* a superior, but only a *duty to* a superior. If the administrative system of necessity accords him equal treatment with others of his kind, he may come to expect it but cannot assert it as a right.

Another facet of the exigencies of the administrative process, to be discussed in more detail in the topic "Decree and Public Process" in Chapter V, is the requirement of consistent implementation of pronouncements uttered by administrative authorities. As will be noted, rational consistency is fostered by bureaucratic necessity in the implementation of orders and decrees at a distance in time and place.

Patriarchal Individualism

The reciprocal of bureaucratic individualism is the individualism of a single ruler or leader who is free to do as he pleases and is vested with power over a few or many dependents whose interests are seen as an extension of his own. The patriarch exercising direct authority over an extended family may be seen as a microcosm of a king or tyrant exercising control over a vast administrative system. In both situations, attention is focused on the single individual and his particular interests. In various hierarchical structures this aspect of individualism, vested as it is with prerogative, contributes to the development of a political sense of rights and an economic sense that one's personal self-interest should be the basis of one's actions.

In the early period of Greek history, communities were governed by a wide variety of political structures and patterns of authority, but the basic unit was the patriarchal household (*oikos*), the extended family under the control of the patriarch who had military, economic, and religious roles to perform. In the Greek household the traditional family structure was held together through the fourth generation,[36] and this system could create large and potentially influential socioeconomic units.[37] With his religious duties, the head of the family replicated the priest-king tradition of the Asiatic empires on a small scale,[38] although Paul Vinogradoff has pointed out that the Greek patriarch did not exercise the same absolute monarchical, life-and-death power that

was vested in the Roman paterfamilias. The Greek patriarch's power was tempered by reciprocal rights vested in his sons. For example, a son's duty to support his father was conditioned upon the father's having properly performed his duty to provide an education for the son.[39] The limitations on the head of the ancient Greek household may well have resulted from the democratic pressures of the fifth and fourth centuries B.C.[40] The power of the family head to exercise discretion in accepting a newborn infant into the circle of the hearth included the power to reject a defective child and consign it to exposure, a practice alluded to in Plato's *Theaetetus* (160e–161a). The early Greek attitude toward political leadership seems to have derived from their conception of the functions of the family patriarch. Aeschylus refers to "the hearth" of the country (*Supp.* 372).[41] Like the head of the household, the ancient kings were also vested with religious duties.[42] The community as an extension of the *oikos* of a ruler is suggested in Aeschylus's *Oresteia* where the disorder in the kingly house and in Argos are intertwined.

The leadership tradition of the early Greek community may be better understood from the point of view of the concepts of virtue (*arete*) and responsibility which, according to A. W. H. Adkins, imbued the culture with a success ethic. Thus: "Success [was] so imperative that only results [had] any value: intentions [were] unimportant."[43] If the family head (and, by extension, the ruler) succeeded in providing the security and stability from which economic well-being flowed, all would be well. But if he were to fail in warfare, all would be lost. The highest praise was reserved for those who succeeded, but "the most powerful words in the language [were] used to denigrate those who fail[ed]."[44] Sociologists would call this a "shame culture." Mary Lefkowitz has noted that "Anglo-Saxon sportsmanship demands that there be second and third prizes, honourable mentions, and runners-up. But in ancient Greece there was only one winner."[45] She praises Frank J. Nisetich's translation of Pindar's *Victory Songs*, quoting "Pythian 8" (81–87) as an example of the starkness with which it renders the calamity of defeat even in athletic contests: "they slink along back alleyways,/ shunning enemy eyes/ and nursing pain,/ the bite of defeat."

Arete or virtue in this tradition was specific or goal-oriented and represented effectiveness, a limited aspect of efficiency. A more general concern for efficiency introduces incremental or marginal considerations. Effectiveness in the sense of being successful is crucial in a simple total win versus total loss situation, i.e., a zero sum game. From this perspective, the decision-making process retains a highly personalized, egocentric or hedonistic character, resulting in a form of individualism—patriarchal individualism—that places the interests of the community and responsibility to dependents secondary to

the sense of status and personal image of the individual in a heroic tradition. This outlook was expressed in the development of the Greek *polis* in the assumption of a sense of individualistic prerogative by the aristocracy and resulted in what Chester G. Starr characterizes as "aristocratic individualism."[46]

An integral part of the heroic tradition was the strong and charismatic military leader who functioned as an individualistic decision-maker in the Greek community. With incessant warfare between the peoples of the ancient Greek world, and with the acceptance of war as "a natural condition of human society,"[47] the threat of military disaster hung so heavily over the communities of the Aegean that all other considerations paled in comparison with the importance of their success in surviving this always impending catastrophe.[48] Even attempts to discuss economic prosperity usually dealt first with the absolute priority of military security and took the success of an agrarian economy for granted as a natural consequence of peace. Economic prosperity was often represented as a result of the stability which comes from good order and justice insured by a strong leader who could keep the community free from "travailing war" (*Works and Days* 229). This is the picture drawn in the *Odyssey* of the Phaeacians who lived "far apart in the wave-swept deep/ on the edge of the world" (VI.204–5) so that no one would come "bearing battle-din" (203). Odysseus also attributes prosperity to the head of the household who "sustains procedures-of-justice-that-are-good" (*Od.* XIX).[49]

When the individualistic, heroic pattern of warfare was replaced with the hoplite method of fighting in the late seventh century B.C., the dominant role in Greek communities was no longer confined to a limited circle of leading patriarchs. Now a wider group of male citizens prosperous enough to provide their own weapons could exert the political clout previously reserved for the few. The hoplite phalanx was a close-order formation, a veritable moving wall of shields bristling with spears that could overwhelm larger forces that were disorganized and undisciplined. Like the relatively inexpensive crossbow and musket, introduced in the Middle Ages to replace the extremely expensive coat of metal armor as a necessary accoutrement in warfare, the organization of the hoplite phalanx in ancient Greece diffused a role in warfare to a wider segment of the community. The sense of integrated individualism resulting from the organization of hoplites into the phalanx seems to have created an esprit de corps, a sense of union and of common interests and responsibilities which extended beyond the circle of landowners able to afford the still relatively expensive panoply of arms to even the less prosperous members of the community.[50]

How was it that hedonism, with its emphasis upon subjective comparisons of quantity, came to be used as the basis for the proper choice in military and

social conduct in a culture in the absence of the all-pervasive market patterns with which it is usually associated? We have seen that the administrative process requisite to the effective control of vast empires by an authoritarian ruler introduced rational practices based on quantitative considerations which resulted, incidentally, in an abstractly defined individual as the basic unit of society. On the other hand, the diffusion of the patriarchal success ethic to the head of every nuclear family unit established the male citizen as an individual decision-maker. These two contrasting sources of the rational calculation of efficiency must have contributed to the subsequent formal emphasis upon private household management and a hedonic calculus of rational self-interest.

II Hedonic Calculation and the Quantification of Choice

I have no great faith in political arithmetic.

—Adam Smith[1]

Most economists would agree that the spirit of quantitative rationality and subjective individualism promoted by Benthamite utilitarianism and frequently designated as the hedonic calculus provided the touchstone for the rigorous theoretical developments of nineteenth-century classical economic theory built upon the notion of *homo economicus*.[2] It was even more fundamental to the marginalist revolution of the last third of the nineteenth century. Although a crass form of "hedonism" has often been mistakenly associated in the popular mind with the ancient philosopher Epicurus, economists have tended to identify the hedonic calculus with the rationalist spirit of the Enlightenment. Consistent with its association with Bentham, it has been tempting to assume that the hedonic calculus was spawned by observations of burgeoning commercial activity in eighteenth-century England and that it represented the application of scientific measurement to the development of an operational theory of commercial and political conduct.

In actuality, hedonic calculations of self-interest were worked out in great detail in ancient times with, however, little reference to exchange or commercial values.[3] Its ancient political use is illustrated by Pericles' contention in his funeral oration (Thuc. II.40) that "We are alone among mankind in doing men benefits, not on calculations of self-interest, but in the fearless confidence of freedom."[4]

An extended abstract analysis of hedonic self-interest is found in Plato's dialogue *Protagoras*. Two problems deserve our attention: (1) the context in which the ancient Greeks developed this analysis; and (2) the possibility that this pattern of analysis was transferred from one area of inquiry to another.

Hedonism in the Protagoras

The *Protagoras* is a long, multifaceted discourse in which the youthful Socrates is pictured matching wits with the famous sophist Protagoras, before an audience of the leading intellectuals and citizen patrons of learning of Periclean Athens.[5] Protagoras was a prominent teacher and confidant of Pericles, the leader who symbolized the zenith of Athenian democracy. Plato may have used this dialogue to present Protagoras's views while also advancing some of his own notions camouflaged in the rhetoric of more widely accepted ideas.

Protagoras of Abdera claimed to be able to instruct his pupils so as to improve their *arete*, variously translated as "virtue" or "excellence," and to make them better citizens. It was alleged by Diogenes Laertius (*Lives of the Philosophers*, IX. 53) that he was discovered and taken in as a student by the famous atomist philosopher Democritus, a few years his senior, when the latter noticed Protagoras's intelligent behavior in work as a common porter.[6] This story is presumably the source of the well-known comment by Adam Smith on the overemphasized difference between the porter and the philosopher.[7]

At the beginning of the dialogue, Protagoras develops his views on the origins of human society with his famous thesis that *dike*[8] (justice) and *aidos*[9] (respect for others) are the divinely instilled elements in mankind which make civil society possible. If one accepts these concepts as meaning "a sense of order and mutual sympathy," one gets a clearer picture of Protagoras's social philosophy, and it is appropriate to suggest the importance of familiarizing oneself with Protagoras's myth in order to understand Adam Smith's concept of fellow feeling or human sympathy in his *Theory of Moral Sentiments*.

Toward the end of the dialogue, the theme of the teachability of virtue or *arete* is taken up, and Socrates leads the discussion into an analysis of pleasure and pain.[10] The full significance of this discussion of *arete* in terms of criteria for measurement has been given little attention.[11] *Arete* was treated in Chapter I in terms of its traditional significance as a success ethic.[12] Here, however, the functional aspect of this somewhat ambiguous term, with its implicit efficiency connotation, is more relevant for a quantitative evaluation of decision making.[13] In the dialogue Socrates' and Protagoras's views are counterposed to those of the mass of mankind. Plato guides the discussion to develop his own (or Socrates') view that individuals only do wrong through ignorance. This notion provides a reference base for the moral theory that no individual will voluntarily damage the harmony of his psyche by being unjust (or less than excellent), a tenet of the *Republic*, where an ethical hedonism is developed.

This emphasis is in contrast to Protagoras's contention that "virtue" can be taught, with primary reference to effectiveness or efficiency in managing pri-

vate and public affairs. No one seems to have noticed the fact that what Protagoras claimed to teach, "the proper management of one's own affairs, how best to run one's household, and the management of public affairs" (*Protag.* 318e-319a) sounds very much like political economy. At any rate, we know that such an "economic" approach to the management of household and public affairs was a popular topic of discussion in Protagoras's day. In Aristophanes' *Frogs*, there is a debate to determine the most outstanding poet and educator to be brought back to earth to guide the Athenian people. Aristophanes has Euripides state his qualifications as follows (975–88):

> I taught them all these knowing ways
> By chopping logic in my plays,
> And making all my speakers try
> To reason out the How and Why.
> So now the people trace the springs,
> The sources and the roots of things,
> And manage all their households too
> Far better than they used to do,
> Scanning and searching *What's amiss?*
> And, *Why was that?* And, *How is this?*
> Ay, truly, never now a man
> Comes home, but he begins to scan;
> And to his household loudly cries,
> *Why, where's my pitcher? What's the matter?*
> *'Tis dead and gone my last year's platter.*
> *Who gnawed these olives? Bless the sprat,*
> *Who nibbled off the head of that?*
> *And where's the garlic vanished, pray,*
> *I purchased only yesterday?*

What else could Aristophanes have had in mind in this passage than portraying Euripides as setting the Athenians to thinking like economists, particularly when one considers the numerous economic allusions in all of his plays?[14]

The exposition of the debate with Protagoras begins when Socrates asks whether "'wisdom,' 'soundness of mind,' 'courage,' 'justice,' and 'holiness'" are "five names for one thing" or whether "there correspond to each of these names some separate thing or entity with its own particular power, unlike any of the others?" (349b). Protagoras concedes that four of the aspects of excel-

lenee resemble each other, but maintains that courage is "altogether different from all the rest" (349d).

Soerates then fastens on this eoncession and, using the deviee of a parallel term, "daring," exaets the admission that most daring men (high divers, cavalrymen, etc.) are daring beeause of their knowledge but that ignorant men are daring through foolhardiness. The latter eonduet, he argues, cannot be eonsidered an expression of "exeellence" (effieieney). Soerates presses the argument that if wisdom or knowledge makes men more daring and if the daring are courageous, then wisdom and eourage are the same thing.

The new taek is to equate the "good" with the "exeellent." Soerates queries, "So to have a pleasant life is good and to have an unpleasant life is bad?" Then he adds: "What I say is, in so far as things are pleasant, are they not to that extent good, leaving their other consequences out of aeeount? And again it's the same with painful things; in so far as they are painful, are they not bad?" (351e).

Protagoras replies, "I don't know . . . whether I should give such a simple answer. . . . Rather it seems to me safer . . . to reply that some pleasant things are not good, and again that some painful things are not bad . . . and a third elass is neutral, neither good nor bad" (351c–d). Soerates and Protagoras then agree to investigate systematieally the relationship between the pleasant and the good, and to determine whether or not they are the same.

The use of subjeetive pleasure and pain as a measure of well-being eoineides with the subjeetive relativism presented in Plato's *Theaetetus*, in whieh Protagoras's theory of pereeption and knowledge is developed in detail. We may thus assume that this subjeetivist or utilitarian formulation, although here eredited to Socrates, is primarily Protagorean or, more generally, atomist and, later, Epieurean, and that Soerates' role of leading the exposition in both dialogues, with Protagoras playing the straight man, is merely heuristic lieense on Plato's part.[15] As developed in Chapter VI, both Aristotle and Protagoras appear to have distinguished effieieney of means from ends. These ends, for Protagoras, are the subjeet of qualitative ehoiee. Aristotle, however, aeeepts a eonventional definition of happiness as the objeet in terms of whieh effieieney is to be judged. Soerates in this diseussion seems to be laying the groundwork for a naturalistie teleseoping of means and ends, whieh he aeeomplishes in the *Republic* with his doctrine of ethieal hedonism, discussed in Chapter IV. For Soerates, virtue is its own reward and its effieieney lies in the inner pleasure it gives to the ethically hedonistie individual.

After indicating that he wishes to examine the whole issue from the point of view of a perceptive observer, Soerates returns to the question of the role of knowledge and asks whether "if someone knows what is good and bad, he

would never be conquered by anything so as to do other than what knowledge bids him?" He contrasts this with the views of the ignorant majority who, he says, believes that knowledge can be overcome by passion, pleasure, pain, lust, and fear. Socrates concludes with the proposition that "intelligence is a sufficient safeguard for a man" (352c).

This returns the argument to a moral theme and to one of Plato's pet theories, that men will behave properly if they are shown that it is reasonable by men of superior intellect. The corollary to this thesis is that those who do not accept the intellectual formulations of the most knowledgeable demonstrate an incapacity to function as citizens and, in the *Statesman* (293d), Plato suggests that they can be eliminated from society. This confusion of the issue of subjective measurement with the moral connotation of "good" runs through this discussion, but it does not, as we shall see, obscure the clear elucidation of the hedonistic formula.

The discussion fails to distinguish clearly between (1) a subjective appraisal of one's own moral or material well-being; (2) an objective appraisal of one's moral or material well-being based on the superior knowledge of another; and (3) an appraisal of optimum social welfare based on objective knowledge, however arrived at. In the *Theaetetus*, it is clear that Protagoras held a theory of how individual perceptions of well-being move toward a social consensus of public welfare. In contrast, Plato emphasized the development of objective knowledge of personal well-being, to which individuals could be expected to respond if their ignorance could be overcome by a superior leader. In either case, the hedonic calculus provided a rational model in terms of which measurement was the key to efficient conduct. Donald J. Zeyl[16] fails to realize that all of these perceptions can be measured by a hedonic calculus, and he limits his definition of hedonism to simple material gratification.

Socrates next poses the problem of the ignorant majority believing that men can be diverted from proper conduct by being overcome by pleasure, and he subtly broadens the terminology to give both a moral *and* a material content to the value problem: "Join me," he asks, "in trying . . . to teach them [the majority] the real nature of the experience that they call being overcome by pleasures and for that reason failing to do what is best" (*Protag.* 352e–353a).[17]

After a slight digression, the question is posed for the apocryphal majority who may believe that a man will do things that are bad for him when overcome by the pleasures of food, drink, or sex: "Do you suppose," he asks, "that they [the majority] would give any other answer than that they [the indulgences] are bad not because they produce immediate pleasure, but because of what comes later, diseases and the like?" (353d–e). Continuing to address the fictitious majority, he adds, "Don't you think that, as Protagoras and I main-

tain, the only reason these things are bad is that they result in pains and deprive one of other pleasures?" (353e–354a).

Socrates then switches the argument and asks whether the majority would regard such things as strenuous athletic activity, warfare, medical treatment by cautery, amputation, drugs, and starvation diets as painful and yet "good," at the same time making a subtle substitution of the morally loaded term "good" for the more materialistic term "pleasant." He asks, "Now do you call them good because at the time they cause the most extreme suffering and anguish, or because later on they produce things like health and good bodily condition and the safety of the city and rule over others and wealth?" (354b).

The pattern is filled out as follows: "So it's pain which you regard as evil, and pleasure as good, since you even call enjoyment itself bad when it deprives you of greater pleasures than it has in itself, or leads to pains which are greater than its own pleasures. For if you call enjoyment itself bad for any other reason and by reference to any other result, you would be able to tell us what it is. But you can't" (354c–d). Finally, to complete the logical array, Socrates says, "Don't you call suffering pain itself good when it gets rid of greater pains than it has in itself, or when it leads to pleasures which are greater than the pains?" (354d).

These sketchy excerpts from the dialogue are sufficient to demonstrate the clear presentation of the utilitarian principle that present pleasure may outweigh future pain, although Socrates insists that knowledge of future pain will lead men to forgo current pleasures that are inadequate to justify the price paid in the future. The dialogue has thus boxed in the four basic elements of the hedonic calculus: (1) forgoing present pleasures to avoid greater future pains; (2) accepting present pains to enjoy greater future pleasures; (3) forgoing present small pleasures for greater future pleasures; and (4) accepting small present pains to avoid greater future pains.[18]

After another digression correlating pleasure and pain to good and evil, Socrates returns to the question of whether an individual can be led to do something ultimately bad because he succumbs to an immediate pleasure. He then launches into a narrative exposition of the measurement of pleasure and pain. It is such a complete and articulate summary of the hedonic calculus[19] that it deserves quoting at length:

> And what other way is there for pleasure not to be worth pain, except that one should be more and the other less? And that is a matter of being larger and smaller, or more and fewer, or more and less intense. For if someone said, "But, Socrates, there is a great difference between immediate pleasure and pleasure and pain at a later time," I should say,

> "Surely not in any other respect than simply pleasure and pain: there isn't any other way they could differ. Rather, like someone who is good at weighing things, add up all the pleasant things and all the painful, and put the elements of nearness and distance in the scale as well, and then say which are the more. For if you weigh pleasant things against pleasant, you always have to take the larger and the more, and if you weigh painful against painful, you always have to take the less and the smaller." (356a–b)[20]

After the equilibrium formulations of magnitude, intensity, and time in measuring pleasures and pains have been introduced, propinquity is added with the following question: "Do the same magnitudes look bigger when you see them from near at hand, and smaller at a distance, or not?" (356c). This discussion of the subjective perception of magnitudes in terms of distance is part of a discussion of other phenomena, for example sounds, and is capped off with emphasis on measurement as compared with subjective appraisal: "So if our well-being had depended on taking steps to get large quantities, and avoid small ones, what should we have judged to be the thing that saved our lives? The art of measurement or the power of appearances? The latter, as we saw, confuses us and makes us often change our minds about the same things and vacillate back and forth in our actions and choices of large and small things; but measurement would have made these appearances powerless, and given us peace of mind by showing us the truth and letting us get a firm grasp of it, and so would have saved our lives" (356d–e). Later the emphasis upon measurement is reiterated: "Since we have seen that the preservation of our life depends on a correct choice of pleasure and pain, be it more or less, larger or smaller or further or nearer, doesn't it seem that the thing that saves our lives is some technique of measurement, to determine which are more, or less, or equal to one another?" (357a–b).[21]

Although this materialist exposition is here once again credited to Socrates, in the *Theaetetus*, where Protagoras's subjectivist philosophy is presented in greater detail with similar phrasing, the emphasis on measurement and the relativism of subjective appearance is specifically attributed to Protagoras. Socrates is here, however, suggesting that measurement offers an objective source of *real* information. This is consistent with Pythagorean ideas of a mathematical substrate to existence. Socrates pursues the theme of measurement, arguing that, with knowledge, the proper weighing of pleasure and pain will result in obvious choices, and that the choice of a minor present pleasure which results in a major future pain which is not worth the minor pleasure is not an instance of weakness, but of ignorance or error.[22] He then asserts a

theory of choice in which correct choices are made with knowledge and bad choices are made through error.[23] So, in fact, Socrates concedes that "virtue," or excellence, is teachable.

At the conclusion of the discussion of the importance of the abstract measurement of pleasure and pain as a means of avoiding erroneous or ignorant behavior to which the vast majority of mankind may be subject, Socrates returns once more to the original topic of this part of the dialogue, the nature of courage. It had been agreed that all parts of "excellence" or "virtue," except courage, are closely correlated to wisdom or knowledge. Socrates makes the point that the courageous man in a military context is courageous either because he knows that he must take risks to avoid even greater future harm, or because he knows that he will prevail. To expose himself when he has little chance of success and when the long-term benefits do not justify it is not true courage but foolhardiness. It is ignorance of the facts, not courage, that leads to such conduct. Similarly, the man who is called a coward acts as he does either because he believes that he has no chance of success or that potential future benefits do not justify present risks or exposure. He is doing no more than exercising legitimate choices which, however, are based on incorrect information. So Socrates concludes that the aspect of excellence called "courage" is correlated to knowledge and is therefore also teachable because lack of courage is only a result of ignorance.

The juxtaposition of the material returns of military decisions, an economics of choice, with the moral overtones of masculine virtue and the insistence that an individual will only fail to follow the optimum course of action through ignorance may well be a rhetorical device of Plato's to co-opt the hedonic calculus for his ethical emphasis on individual rational guidance in the *Republic*. There are extended discussions of the hedonic aspects of "courage" in other Platonic dialogues, notably in the *Laches* (192a–199d). In the *Republic*, courage is defined from an administrative standpoint as a "power" to be set in the souls of the soldiers of the Republic "like a dye" that "might not be washed out by those lyes that have such dread power to scour our faiths away" (430a–b).

The fact that Xenophon also gave attention to the hedonic or efficiency aspects of courage suggests greater interest in the quantitative decision-making role of the proper masculine prototype exercising the patriarchal success ethic than is indicated by the use of the issue as an illustration of the general hedonic calculus in the *Protagoras*. In the *Memorabilia* (IV.10–11), Xenophon summarizes the bases for decisions regarding military encounters in the same terms as Plato does in the *Protagoras*, emphasizing knowledge of risk as the most important element. This discussion is between Socrates and Eu-

thydemus, who was associated with economic discussions elsewhere in the *Memorabilia* and also in Plato's dialogue *Euthydemus*, where the "royal art" or administrative art is defined.

Of more general interest is Xenophon's discussion of the appointment of Antisthenes as general (*Mem.* IV.4.1 ff.). The appointment had been criticized by a defeated candidate with more military experience who contended that Antisthenes understood "nothing but money-making." His appointment is defended by Socrates on the ground that a good administrator, as "a good controller," can get what he wants and can thus manage "a chorus, an estate, a city or an army." Further: "The good business man, through his knowledge that nothing profits or pays like a victory in the field, and nothing is so utterly unprofitable and entails such heavy loss as a defeat, will be eager to seek and furnish all aids to victory, careful to consider and avoid what leads to defeat, prompt to engage the enemy if he sees he is strong enough to win, and, above all, will avoid an engagement when he is not ready" (*Mem.* III.4.11). This is an efficiency definition of success in warfare posed in the same terms as courage was by Plato.[24]

The Repetition of Paradigms

The fourth-century B.C. literature quoted above developed a quantitative theory of value based on individual subjective sensation. Plato even used what appears to be a commercial symbol, the balance or scale, to illustrate the precision of the value equilibria involved. So close is the formulation to the hedonic calculus which Bentham elaborated that it might be assumed that the ancient perspective on rational, quantitative comparison—balancing magnitude, intensity, propinquity, and time—must have been an adaptation of a perspective learned from the marketplace. So far as we know, however, this value system was applied only to a sort of microeconomics of moral conduct.[25] The assumption that such precise analytic abstractions derived from observations of market-oriented economic activity in ancient Greece goes far beyond what most scholars are willing to concede. They emphasize the administered character of ancient Greek trade and the highly circumscribed nature of isolated and unique transactions. Such an economic milieu would make generalization unlikely.[26] However, it does appear likely that this abstract, rational schema of quantitative value appraisal, worked out in ancient discussions of the measure of moral excellence, was the direct source for its application to a philosophy of natural reason in the eighteenth century by thinkers such as Bentham. Despite the fact that Bentham followed the common eighteenth-

century practice of seldom citing any sources for his ideas, the ubiquity of the Platonic corpus in British education up to the beginning of this century is sufficient evidence of a direct influence.[27]

Bentham, at the very beginning of chapter 1 of his *Principles of Morals and Legislation*, takes the position that pleasure and pain are the determinants of both natural and reasoned behavior and, in his formulation, reason is required to carry individual principles into social principles of the greatest pleasure or happiness of the greatest number. Plato, on the other hand, considered reason to be the process by which ignorant men can be taught to measure pleasures and pains properly in order to maximize their utilities in their own personal interest as virtuous citizens. We can recognize in this perspective the notion that the individual businessman, if he accepts training from economists, will learn to balance his future and present pleasures and pains (profits and losses) in order to become more virtuous (prosperous), or, in the alternative, that he will tend to do so *by nature* and thus provide a basis for scientific abstractions formulated by economists. According to the latter abstraction, the laissez faire theory of the market, the elimination of the unsuccessful will automatically result in the survivors being a "natural" expression of rational adjustment.

Another interpretation may be suggested for the transfer of this ancient hedonic calculus from one analytic system to another, and from one cultural setting to another. One of the premises inherent in both the empiricist and positivist traditions is that the human mind is innately rational. Under this assumption, it would appear perfectly reasonable that men at all times and in all places would formulate abstract models or schemas for making both intrapersonal and interpersonal utility comparisons, even though the specific values in the latter case would not match. Following this line of interpretation, we may marvel at the degree of abstraction expressed in the discussions among ancient philosophers and note that Bentham probably drew on this formulation in developing a theory of the natural and moral basis of society which compiled the individual hedonic judgments of the citizens. Both the natural forces of the market and the benign hand of the rational administrator may have provided the empirical basis for the development of the utilitarian theory of society and economy.

In contrast, more institutionally oriented theorists would argue that individual, subjective values are a result of cultural indoctrination, as are also the institutions and ideology governing the development of any given social consensus. Following this perspective, formal, rational comparison cannot justifiably be derived from mere observation of quantitative phenomena, but must

be derived from the development of a concern over choice-making between alternatives that must somehow be made commensurable. Given such demands upon human judgment, it becomes open to question whether the development of a perspective for subjecting all considerations to a single, constant measure is an expression of the natural capacity of the human mind or simply an expression of conventional thought.

An alternative line of interpretation for the genesis of the hedonic calculus finds more support in the realities of ancient life. In the Greek world, practical reality was never very far from the minds of statesmen and poets, philosophers and kings, as noted in Chapter I. The military exigencies of the ancient world required a heavy emphasis upon intensive training in the martial arts for all citizens capable of bearing arms. In a world where the conqueror usually sold captives into slavery or placed the captured city under heavy tribute—and where taking booty was regarded as a legitimate form of "production"—warfare was of prime economic concern. In this setting, the calculation of effectiveness was literally a life and death matter. Of secondary importance, although crucial to effective military strength, was the ability of prominent citizens to organize and lead the rather individualistic citizenry of the Hellenic city or *polis*. Finally, an effective agricultural base was necessary for the support of the populace. Successful living in ancient Greece thus required effectiveness in military, political, and agricultural pursuits, probably in that order.

As noted in Chapter I, the ancient Greek concept of *arete* was a somewhat broader pragmatic notion than its translation as "virtue" would indicate. Adkins suggests that in the masculine tradition of ancient Greece, *arete* was associated with being successful or effective,[28] although this attitude was increasingly tempered by moral considerations by the fifth century B.C. The military leader who saves his city or the patriarch who saves his sons from being killed and his wife and daughters from being carried off as slaves demonstrates *arete*. If he uses trickery or deceit, what matter, as long as he is a winner? If he loses, he will be despised and scorned, regardless of how brave a fight he put up: he is a loser.

In this context, the elements of virtue, excellence, courage, wisdom, justice (with the older connotation of orderliness), soundness of mind (a cool head), and holiness (fellow feeling or a cooperative spirit) are the components of success or effectiveness. There was an extremely strong tradition in the Greek world which emphasized the importance of training and education. Fathers taught their sons (or hired competent tutors): the economics of success depended on self-assurance, charisma, wit, and courage, along with skill at arms and horsemanship. Before the emergence of bureaucratized government and the impersonal market, the hierarchy was one of personality and overt

success where instability permitted mobility, a fact that may be equally true in the modern corporate executive suite.

We can thus interpret the hedonic analysis of Protagoras as a materialist and quantitative formulation of the economics of the successful weighing of choices in the life of the times. Socrates' desultory digressions into moral parallels reflect a particular philosophical variant of hedonism put forward by Plato promoting the idea that reason, primarily the reason of an authoritarian sovereign, should acquire the force of objective moral law.

As Adkins noted, the popular or democratic notion of *arete* which also emerged at this time was associated with what he calls the "quiet" or "cooperative" virtues, the sentiments of compassion and concern for the weak which came from the distaff side of the house.[29] Atomists like Epicurus (and possibly Protagoras) came closer to this moral tradition with their support of democratic principles and the doctrine of sympathy and fellow feeling or mutuality as a basis for social cohesion. Be this as it may, the development of a materialist, quantitative value formulation of choices in the pursuit of efficiency and success is a very broad economic image that comprehended military, political, and agricultural pursuits. It is entirely consistent with the orientation of the economic writings of both Xenophon and Aristotle, which deal with efficient organization of available elements as parts of a mosaic which human intelligence can compose into an effective pattern.[30] This is a premarket, administrative perspective which probably dominated the attention of practical men until the organized market became a major force in the economy during comparatively recent times.

It may be suggested that the hedonic formulation, discussed above, was essentially an efficiency-oriented calculus of choice applied to the greater "market" of military and political survival, an application as appropriate for the ancient Greeks as the utilitarian approach to market exchange was for nineteenth-century economists. We must, however, go considerably beyond this formulation of the setting of the ancient hedonic calculus that seems an obvious ancestor of Benthamite utilitarianism. In the Hellenic world of Plato's day, two great philosophical schemas were conspicuous on the ontological scene. One was the atomist, which contended that all relationships in nature are built up of quantitative interactions explainable in terms of accumulations of a basic building block, the atom. The counterpart of this theory in social analysis was the notion of the individual as the building block of democratic society. The other theory, with which Plato showed some sympathy, was the Pythagorean view that number was either a mystical or material abstraction of physical reality, which meant that all natural phenomena could be expressed in terms of numerical relationships and analyzed in mathematical terms.

Under this latter assumption particularly, all phenomena could presumably be compared in terms of whole number "ratios"; therefore, all phenomena in nature and society were "rational."

For the atomist and both the mystic and scientific branches of the Pythagorean schools, a fundamental problem persisted. Was it possible to develop a logical, rational analysis of how a quantitatively consistent, hedonistically oriented individual could participate in organized society? This issue was treated in the Platonic dialogues in discussions of whether justice "pays." In this formulation, the question was raised as to whether it would personally benefit an individual to behave justly toward others when his personal interests conflict with social interests. The general assumption was that the pressure of the public forum (the political marketplace) would require one to uphold public standards in order to maintain one's status and acceptability in organized society. The logicians of the day, however, could not avoid entertaining the possibility that, from a subjectivist, utilitarian point of view, the individual would receive maximum benefit from maintaining the *appearance* of justice, while profiting from the personal benefits of injustice. Unfortunately, the ancients had not noticed the invisible hand.

Plato's "ethical hedonism," based on rational choice in maintaining self-control and moral purity, is perhaps better known than Protagoras's more complex theory of social process. In his myth, the fellow feeling and mutual sympathy given to man by Zeus made social responsibility a natural phenomenon. Epicurus's theory of the innate attraction or "swerving" of the atoms was a materialist parallel of Protagoras's concept. In the nineteenth century, Adam Smith in his *Theory of Moral Sentiments* utilized Protagoras's formulation in his principle of "human sympathy" as the basis for social cohesion and his rejection of the naive rationalism of the social compact thesis. Plato's treatment of the issue of whether justice "pays" will be discussed more fully in Chapter IV. Protagoras's view of the social process will be considered further in Chapter VI.

Of more immediate importance is the relevance of the quantitatively oriented hedonic calculus to Xenophon's treatment of the administrative art, which will be examined in Chapter III. The ubiquity of discussions of subjective value (pleasure/pain) in ancient times and their association with quantitative measurement,[31] frequently symbolized by the balance, belies the common contention that Xenophon was oblivious to quantitative considerations in his economic writings. Although he laid greater emphasis upon aspects of quality, there are sufficient indications in the *Memorabilia* that Xenophon was thoroughly familiar with the hedonic calculus.

III Xenophon and the Administrative Art

Economics . . . may be taken to include the study of the general principles of administration of resources, whether of an individual, a household, a business, or a State; including the examination of the ways in which waste arises in all such administration.

—Philip H. Wicksteed[1]

Among the authors of antiquity whose works have been preserved fairly completely, Xenophon ranks with Plato, Aristotle, and the major playwrights. The philosophical content of his writings is widely regarded as inferior to that of Aristotle and Plato, and his literary craftsmanship is undistinguished. However, his writings had a wide readership in Roman times and as late as the eighteenth century his *Ways and Means* was studied for its practical analysis of economic and administrative problems.

In his military history of the Persian campaign, *Anabasis* (*The March Up Country*), and in his romanticized biography of Cyrus the Great, *Cyropaedia*, Xenophon speaks to the legions of men and boys who, for over two thousand years, were steeped in the military and manorial traditions of the Mediterranean and western Europe. His writings present a vivid combination of romantic adventurism and practical common sense, directing attention to the real problems that confronted the ambitious young man who moved in the world of cavalry actions and hunting parties, manor lords and loyal peasants, brave kings and honored knights, and were an important part of the literature that helped carry the chivalric tradition as a viable ideal into the early part of this century. One must recall the role of classical literature in the education of the wealthier classes in western Europe up to modern times, as well as the manorial bias that led nearly every successful merchant to acquire a rural estate and to identify with the "gentry." With this background, we can better appreciate the influence of works such as Plutarch's *Lives* and Xenophon's *Cyropaedia*, both of which perpetuated the heroic tradition that history is shaped by the great deeds of individuals of outstanding courage and virtue. The dedicated emulation of heroic role models as the most effective avenue to greatness spawned a whole genre of literature as varied as Xenophon's life of Cyrus

and the more recent Horatio Alger tradition. In this light, we can appreciate the enduring appeal of Xenophon's writings.[2]

Another facet of Xenophon's works of interest to us is the degree to which various sophistic ideas and perspectives penetrated the thinking of this hard-headed and ambitious Greek. As possibly a rather representative member of a circle of prominent young Athenians who gathered around Socrates, Xenophon reflects the nonphilosophic tradition that led some of these self-assured young scions of leading families to repudiate Athenian democracy and, in the case of Xenophon and Alcibiades, even to taking up arms in the Spartan cause against Athens. After retiring to a life of hunting and husbandry on an estate near Corinth donated to him by the Spartan ruler Agesilaos in recognition of his services to the city in the battle of Koroneia in 394 B.C., Xenophon followed the life of the literate country gentleman. Apparently wearing his military laurels comfortably, he became a successful spokesman for traditional values in his native Athens.

During the fifth and fourth centuries B.C., the basic elements of political and administrative policy in Athens were changing and crystallizing in new terms. The majority of the citizenry now presumed to have the right to participate in what were increasingly recognized as community decisions, but the form of democracy in Athens seemed to encourage rather than discourage the emergence of prominent leaders such as Pericles and Alcibiades. Except for a brief flirtation with oligarchy (411 B.C.) and the Tyranny of the Thirty (404–403 B.C.) which accompanied the frustrations and turmoil of the end of the Peloponnesian War, the political structure in Athens nurtured an atmosphere in which prominent individuals used political and rhetorical skills to lead the enfranchised demos. In this period, sophist teachers were in great demand for the training of ambitious youths who, with the aid of family prestige or wealth, hoped to make a career of public life.

Drawing on this formulation of the intellectual and political background of the late fifth and early fourth centuries B.C., we can fill out our picture of the commonplaces of informed opinion by reading Xenophon. His ideas are framed in terms of the individual decision-maker, whether military commander, public administrator, or head of an extended family estate. His outlook is anthropocentric, viewing the physical and social environment of the natural agricultural base, the extended household, and the city state through the eyes of the individual who is charged with managing an enterprise. Training and organization were the primary requisites for success, and they were clearly recognized and pursued as both personal and civic objectives. It is difficult to incorporate such an orientation into modern political and economic defini-

tions of individualism, in which the concept has been blurred and redefined as a deduction from democratic prerogatives assertable by the average citizen against the state, and in which a theory of natural market process has been substituted for the concept of individual administrative planning.

Xenophon's writings reflect the practical thought of a literate country gentleman with extensive military experience who prided himself on the cultivation of personal excellence in a world being dragged down by presumptuous tradesmen and commoners. His formulations are more likely reflections of widely disseminated ideas, rather than pale shadows of complex philosophical analyses gleaned from his contemporaries, Socrates and Plato. To the extent that Xenophon and Plato cover the same ground, frequently raising similar issues and arguments, we are probably safe in assuming that they were both drawing on the intellectual milieu of their times and that the issues they dealt with were commonplace topics of their day.

Although commercial activity was growing in importance in Xenophon's lifetime, with Athens's port city, the Piraeus, serving as an entrepôt for the trade of much of the eastern Mediterranean, the military arts and agriculture were still important to the ambitious individual and the state. Both Plato and Aristotle structured their recommendations for ideal and practical city states with defense and domestic agriculture as first-order concerns, demonstrating a lack of interest in the social changes attending the development of commerce.

Before undertaking an analysis of Xenophon's works, notice should be taken of the fact that some modern historians of economic thought have denigrated his economic ideas. Joseph A. Schumpeter stated in his massive *History of Economic Analysis*[3] that it would not be necessary to discuss Xenophon's writings, apparently because he found there no analytic content. Schumpeter's position has influenced a number of scholars who have studied the ancient economy, including M. I. Finley, a leading spokesman for the view that the ancients had little to offer of relevance to modern economic theory.[4] Claude Mossé, a prominent French economic historian, points out that Xenophon did not formulate his material in terms that would be called economic analysis today, but she cites his formulation of the law of supply and demand in the *Ways and Means* as approaching economic analysis.[5]

On the other hand, Claude S. George, Jr., a management specialist, contends that in the *Memorabilia* Xenophon recognized management to be "a separate and distinct art" and that in the *Cyropaedia* are illustrated "the value of good personnel or human relations, the need for order, placement, and uniformity of actions." In addition, George notes, Xenophon in his life of Cyrus deals with "motion study, layout, and materials handling," as well as

"the division of work, unity of command, order . . . the need for teamwork, coordination, and unity of purpose."[6]

Before the eighteenth century, political economy was comprehended as a formal concept of ordered relationships involving comparative choices of more and less efficient courses of action.[7] Xenophon's writings are clearly a part of this tradition. Although naturalistic ideas were developing in ancient Greece, the notion of a natural order regulating commerce in an optimally rational way to which individuals should conform was foreign to their assertive and heroic outlook and to the obvious realities of their world, where decisive actions and arguments by charismatic individuals carried battles, controlled slaves, and swayed the majority in public debate. Xenophon's writings contain instructional material intended to guide the prominent citizen in dealing with the most important economic problem of the day, as he saw it: the proper organization and administration of private and public affairs. This is clearly true of the *Oeconomicus*, which deals with agricultural, military, and personnel matters. Although his *Cyropaedia* is a romanticized biography, it is in the instructional tradition emulated by Plutarch in which the virtues and leadership qualities of great men were recorded as role models for young men in their formative years. One writer called it a "pedagogical novel."[8] The *Ways and Means* is a prescription for the economic revitalization of Athens in the middle of the fourth century B.C., and its practical common sense gave it continuity into modern thought. It was, for example, appended as a supplement to the 1698 publication of Davenant's book on trade and also to the 1751 edition of Petty's *Political Arithmetick*, considered by some to be the first modern treatise on economics, preceding Adam Smith's *Wealth of Nations* by some decades. One should also note the possible influence on Adam Smith of Xenophon's analysis of the division of labor, discussed below. In his letter of transmittal to Davenant, Walter Moyle, the translator of the *Ways and Means*, referred to Xenophon as "the first Author that ever argu'd by Political Arithmetick, or the Art of Reasoning upon things by Figures" and commended "the Exactness of his Calculations."[9]

Without reference to this earlier interest in Xenophon's economic ideas, Finley deplores the nineteenth-century tendency to credit him with an economic contribution. He praises Chantraine's 1949 translation of the *Oeconomicus*, which, he thinks, will "serve to counteract the 'economic' conception of the work."[10] The Romans, he believes, were correct to regard it as an ethical treatise. Finley's assessment may rest on the instructional character of the *Oeconomicus* as well as his own conception of economics as a science based on the analysis of price phenomena. He does not fully appreciate the

practical character of the ancient success ethic nor the quantitative aspect of the hedonic calculus which pervaded ancient "ethical" discussions.

If we approach Xenophon's writings in terms of his own vision of his cultural milieu, the nineteenth-century emphasis on natural market price as the measure of efficiency and the point of departure for "true" economic analysis is of questionable relevance. Moreover, Xenophon's concern with efficient leadership and the organization of men and materials to increase wealth and influence is so pervasive a theme of his work that the clear picture which emerges is not dependent upon the nuances of translation. After all, these were the realities of his day. Although he relegated the growing commercial life of his time to a secondary position, this was probably appropriate for all but a few major commercial centers such as Corinth and Athens.

Maximizing the Human Variable

The classical Greek emphasis on training is epitomized by the prominence of the gymnasium in ancient Greece, where the proper development of the body for athletic and military prowess was an integral part of the education of every male adolescent.[11] This emphasis on training, skill, and knowledge was a recurring theme of Greek literature. In Homer's *Iliad* (XXIII.313 ff.) the aged Nestor lectures Antilochus on the importance of skill ("cunning") to compensate for a slower team in chariot racing. He uses proficiency in wood cutting and in piloting a ship as additional illustrations of the significance of the human factor in achieving objectives.[12]

Thucydides (V.69) describes the events on the eve of the battle of Mantinea, when the commanders on the Athenian side made stirring speeches encouraging the troops before the battle. However, he reports that the Lacedaemonians "man to man, and in their war-songs, reminded each other of what their brave spirits knew already; well aware that the long training of action was of more saving virtue than any brief verbal exhortation, however well delivered."[13] The rallying cry was not "Our cause is just!" but "We are better trained and therefore have an advantage!"

The Greek emphasis on the application of improved skills to problems is a recognition of a form of capital, human capital in modern economic terminology. The application of this potential to other resources, either material or human, to achieve a more efficient result is consistent with modern economic thought, although the Greeks had a different frame of reference. For them, the development of human skill was the determinative element in any enterprise, from the management of a household to the administration of a community. By contrast, nineteenth-century economic theory placed emphasis

upon material, rather than human resources, combined in an optimally efficient manner by impersonal market processes. Human labor here is treated as simply another material resource (commodity), laying the groundwork for conceiving of the economic problem as the subject of a science in which the economist studies natural processes. The entrepreneur, however, was still tuned to the individualistic, elitist, and heroic leadership role of the Homeric tradition; his function as a "captain of industry" was seen as that of a catalyst and innovator in the natural evolution of the market process.

In the ancient Greek world agriculture, trade, and plunder were generalized into a uniform resource matrix. Here one's leadership and athletic status in the community were as important as other forms of wealth, the prime concern being the correlation of one's capacities with whatever material or human resources one confronted. From this anthropocentric point of view, improving one's skill meant nothing less than increasing the efficiency of production. While native ability was surely recognized, the Greeks placed more emphasis on training as a source of skill. The prime variable in this equation was thus one's personal effectiveness in producing a successful outcome. The great man theory of history, humanism, and the labor theory of value, in all of which man is viewed as the determinative factor, are reflections of the anthropocentric Greek tradition.[14] The emphasis of modern economic thought, on the other hand, has been focused more on material scarcity and technology.

The relation between training and natural abilities was a matter of specific concern to the ancient Greeks. Physical and mental capacities are conferred by fate or inheritance and no one can control his original allotment. But they can both be improved by training. Similarly, the resource endowment can be maximized by efficient utilization. In both personal and resource endowments, training and efficient utilization and not the initial allotment are the variables that deserve attention. In the *Memorabilia* (IV. 1.3–4) Xenophon said of Socrates, "To those who thought themselves possessed of natural endowments and despised learning, he explained that the greater the natural gifts, the greater is the need of education."[15] After using horses and dogs as illustrations of the negative results from failing to train the more spirited and promising animals, he observes, "It is the same with human beings."

A major theme of Xenophon's whole *Cyropaedia* is the education and training of Cyrus the Great, an outstanding organizer and leader of men who instituted a humane and economically progressive rule over the Near East a century before Xenophon's time. The Persian system was still being cited as a prototype of the administrative ideal in Plato's day (*Laws* III.694a–b). In the *Cyropaedia*, Xenophon concentrates on the efficient administration and leadership of army and empire. His *Oeconomicus* is a microcosm of the same

theme: the efficient administration of the agrarian estate to maximize productivity. From either perspective, the skills of the manager, whether of the larger or the smaller unit, were to be directed toward the effective combination of human and natural elements.

The physical setting or resource base, to the extent that it was understood or known, was taken as a given by Xenophon.[16] In this static context, nothing new is produced, or at least nothing that is not already implicit in the potential of the existing material world. Zeno's paradoxes remind us that, even with an overall static frame of reference, there is room for a concept of a sequence of adjustments. The advance of human excellence can be seen as a source of nearer and nearer approximation to the absolute potential in the physical world. Such a perspective, though not formally enunciated in the *Oeconomicus*, is implicit in the atomist tradition. The notion of improved training and knowledge to obtain a fuller measure of the potential inherent in natural processes is not a concept of production or progress in the sense of the *creation* of wealth or goods. But if the production process can be broadly defined as the efficient combination of various elements from nature to achieve desired objectives, it will be seen that Xenophon was clearly conscious of production and productivity. From his administrative perspective, human capacity, directed by good leadership, was the chief variable.[17]

The Greek attitude toward the physical environment was basically static, consistent with the relational ideas implicit in geometry and the materialism of Greek science. This might lead one to assume that there could be no Greek theory of economic progress. However, in regard to human potential at least, Robert Nisbet denies that Greek (and Roman) thought was devoid of a concept of progress and improved well-being: "From Hesiod to Seneca we find, *first*, respect, even reverence, for knowledge—practical knowledge, the kind that gives protection, comfort, and well-being to mankind; *second*, a clear conception of the acquisition of this knowledge by man through his own abilities, helped on occasion by the gods, yes, but nevertheless in the long run by man's own efforts; *third*, recognition that such acquisition has taken place cumulatively over a period of time—'in the course of time,' as Xenophanes stated it early on, 'little by little,' in Plato's phrasing, and 'step by step,' in Lucretius' words, written half a millennium after those of Xenophanes."[18] On the other hand, Alan E. Samuel maintains that "political theorists in antiquity associat[ed] change with degeneration," evidenced by Aristotle's treatment of changes of constitution. Hesiod traced man's history in devolutionary terms, with succeeding ages designated by less valuable metals (gold to silver to iron, etc.). Samuel, however, stresses that "growth or progress was a non-issue, not even entering into consideration, since the assumed goal was its

converse, stability." "It is not the absence of a concept which we confront," he adds, "but a whole system of thought based on the pursuit of that concept's opposite."[19] The contrasting views of Nisbet and Samuel rest on their emphasis on different aspects of the Greek outlook, on the potential for individual self-improvement and human knowledge, on the one hand, and on the concern for cultural and physical devolution, on the other.

The ancient debate on the teachability of virtue (i.e., human effectiveness), discussed in Chapter II, was part of the broader question of the innateness of knowledge and the introduction of moral values in education. It was treated by Plato in terms of the proposition that individuals only err through ignorance. This perspective will be examined in more detail in Chapter IV in reference to the molding of public opinion, discussed in Chapter VI. To avoid confusion, the discussion will be limited at this point to administrative concepts of training, knowledge, and organization.

Another aspect of this anthropocentric view of human progress and the accumulation of knowledge is illustrated by a passage in the beginning pages of Thucydides' *Histories* (I.2), where the development of the Athenian state is explained in terms of the interaction of an organized and superior people with a relatively poor agricultural base. The Attic genius is pictured as springing from the sparks struck by the relatively demanding environment, of people rising to a challenge. Later, however, Thucydides (III.82–83) demonstrates that the same human characteristics and processes which contribute to progress also contain the potential for faction and disorder and hence hasten the disintegration of the very progress they incite.[20]

It is important to separate the Greek emphasis on natural endowments and training from the somewhat different issue of creative education. Protagoras took the position that punishment not oriented toward education is mere vengeance and barbaric (*Protag.* 324b), but Plato held a position much more strongly oriented toward the categorization of people in terms of their natural endowments from an early age, with little presumption that their natures could be changed. However, with the guardians, he apparently was as prepared to emphasize training as was Xenophon. In the *Meno* (82a ff.), Plato accepted the possibility of drawing out embedded potential even from a slave.

Though his is not as unqualified a view as Xenophon's in the *Memorabilia* quoted above, Theognis wrote, "It is easier to breed and bring up a man than to put good wits into him: no one has ever devised a way, so far, of making a sensible man out of a senseless one, and a good man out of a bad. . . . If mind could be made and inserted into a man, never would a bad man be son of a good father, for he would listen to his good advice." As for slaves: "Never was a slavish head born straight, but crooked always . . . nor from seaside-

garlic does ever a rose or a hyacinth grow."[21] Theognis's emphatic position, however, does not exclude the importance of education and training. As Xenophon emphasized, the greater the natural potential, the greater the need for discipline and direction. As will be discussed below, Plato developed the view that natural capacities should be taken into account in determining an individual's proper training and role in society. It was Xenophon, however, who seemed to understand the practical value of training in a more open society, as illustrated by his treatment of incentives, discussed below.

The general anthropocentric emphasis of Greek thought on the human variable as the most manipulable component of the successful life took many forms. Henry Fairfield Osborn noted that even their natural science was anthropocentric.[22] The apparent failure of the ancients to develop a primary concern for industrial and technological processes has been explained as a result of both the abundance of cheap slave labor and the ideological bias of the ruling classes.[23] If there was in fact a paucity of technological innovation in antiquity, it may have been a result of the focus on human beings as the key productive variable in management and control.[24] This, however, is not to say that there was absent a sense of efficiency.

The Art of Efficient Administration

Although it is easy to demonstrate that Xenophon did not define an art or a discipline that parallels the market-oriented discipline of economics which emerged in the eighteenth century, he repeatedly refers to the art of the "skilled household manager" (*Oec.* I.3) whose function includes doing what is necessary to "produce a surplus" or "increase the household" (I.4). "Household management" is defined (VI.4) as some kind of "knowledge" by which "human beings are enabled to increase households," with "household" including "the totality of possessions" that are "beneficial" and that "one knows how to use." Elsewhere (*Mem.* II.1.17), Xenophon alludes to the art of the manager as the "kingly art," and the observation is made (III.4.12) that "the management of private concerns differs only in point of number from that of public affairs." When the "statesman" is defined in Plato, it is contended that "there is not much difference between a large household organization and a small-sized city" (*Statesm.* 259b) and that "one science covers all these several spheres," whether it is called "royal science, political science, or science of household management" (259c).[25] This is consistent with Xenophon's extension (*Mem.* IV.4.1 ff.; IV.10–11) of the principles of efficiency to warfare and other facets of life.[26] Clearly, the ancients had something very much like political economy in mind.[27]

The eighteenth-century view conspicuously represented by Adam Smith presumes a system of natural principles which control the commercial and industrial sectors of society. The concern of the statesman is with the provision of basic military protection and legal order, i.e., with providing an arena in which the natural forces of the economy can operate. This has evolved into what is now called macroeconomics. A corollary of this view is a set of generalizations about market processes which reflect what rational individuals will do to maximize their advantage in the market. This latter has evolved into what is now called microeconomics. The assumption that both of these facets of the social process are consistent with natural processes led to the necessary conclusion that they are consistent with one another and that they contribute to a natural harmony between public and private interests.

By contrast, Xenophon was not concerned with the concept of a market, or of market processes as such. He functioned in an environment where military protection was the preliminary condition to other activities. As a result, his generalization of both the macro- and microeconomic problem was in terms of effective leadership rather than the facilitation of a natural process. He emphasized the nature of the relationships between man and man, and between men and materials. "Kings and rulers . . . are not those who hold the sceptre," he reports Socrates as saying in the *Memorabilia*, "but those who know how to rule." He uses the principle of rational self-interest to illustrate the naturalness of the ruling process. Thus, "on a ship the one who knows, rules, and the owner and all the others on board obey the one who knows" (III.9.11) out of a sense of rational self-interest. He extends the principle to farming, medicine, athletic training, and the spinning of wool, and adds that "in fact everybody concerned with anything that needs care, look after it themselves if they think they know how, but, if not, they obey those who know" (III.9.11). The necessity of relying on skilled practitioners is so important, Xenophon emphasizes, that if those who know are not at hand, "they even send for them when absent, that they may obey them and do the right thing" (III.9.11). Our interest in this discussion is in the clarity with which the argument stresses the importance of technical expertise in any endeavor.

This idea of the rationality of following the advice of the expert also occurs in the writings of Plato and Aristotle. Their emphasis on the role of the expert is, however, in the context of a rational justification for subservience to supervision (see especially the *Lysis* 209b–210c). In Xenophon, the idea is mentioned in the context of a discussion of the effectiveness of a "controller" such as Antisthenes (III.4.6), whose administrative effectiveness is said to result from the fact that he "showed himself capable of finding the best experts" (III.4.4). The emphasis here is not on subservience to experts in performing

assigned roles in a social hierarchy, as it is in Plato's ideal city, but on making use of experts to achieve one's own administrative objectives.

Xenophon carries his exposition of rational or efficient conduct in pursuing specific activities into a more abstract theory of efficient management, the practice of the "royal art" by the ruler or ultimate administrative authority, in which rationality and rational self-interest are the guiding principles for both those subject to supervision and the administrator or ruler. In the *Memorabilia* (III.9.12), the issue is posed of whether a despot might "refuse to obey a good counsellor." "How can he refuse?" is the rejoinder, "when a penalty waits on disregard of good counsel?" There is no concern here with differing objectives or values among members of society and no supposition that public and private interests might diverge, but only an emphasis on rational efficiency in achieving common goals.[28]

The degree to which Xenophon reflects the common understanding of the educated Greek of the fourth century B.C. is difficult to appraise very precisely, but the preservation and interest in his work by nonscholarly, practical men suggests that he had a continuing audience. To piece together a coherent account of his ideas, we must work with passages scattered through such general expositions as the *Memorabilia* and *Cyropaedia* and also in the more specifically economic works such as the *Oeconomicus*, the *Hiero*, and the *Ways and Means*. However, the evidence from Xenophon clearly reflects a well-established tradition of formal concern with abstract principles of administration and the general recognition that this was a teachable art. For example, in the *Oeconomicus* Socrates is represented as leading his partner in the dialogue to admitting that, while Socrates was not rich in material goods, he could help train others to avoid losing their wealth and, in fact, to augment it. This is even defined as a capital asset: "It's because I see . . . that you know one enriching work: how to produce a surplus. I expect that one who saves something from a little could very easily produce a large surplus from much" (*Oec.* II.10). In another passage, Xenophon lists a number of crafts and their theories (including ruling, generalship, arithmetic, and economics) which "might be learned and mastered by the application of human powers," but he adds, "the deepest secrets of these matters the gods reserved to themselves" (*Mem.* I.1.7).

A characteristically Xenophontean passage dealing with this generalization of the administrative process gives us a persuasive view of this practical art in ancient as well as modern times. After the passage quoted above in which he asserts that private and public affairs differ only in magnitude, Xenophon points out (III.4.12) that the factor common to both is the human element. "They are much alike," he says, in that "neither can be carried out without

men" and "those who understand how to employ them are successful directors of public and private concerns, and those who do not, fail in both."[29]

The ancient recognition of the primary role of the human element in the successful organization of affairs is a facet we tend to ignore when we approach the ancient world from our modern market-oriented perspective. Their emphasis on training and leadership was a recognition of the two principal variables that often made the difference between success and failure in the ancient world (as in the modern), factors which were difficult to define or to quantify. This anthropocentrism is what we would expect, particularly from a military man who was aware of the tremendous importance of leadership and spirit among troops in deciding the outcome of an engagement, regardless of numbers and equipment.

The Importance of Leadership and Organization

As one reads the works of Xenophon, particularly the more formal presentation of the training and administrative policies of the "great king" in the *Cyropaedia*, a clear and consistent theme emerges. This theme, also reflected in scattered vignettes in his other writings, is that leadership and organization of men are the most important prerequisites to success. The training of men for military and public life is clearly illustrated by both the sophistic and Socratic traditions, and by the strong emphasis on athletic development in the gymnasium. This mixture of mental and physical training is vividly illustrated in Plato's *Euthydemus* by the portrayal of Euthydemus and his brother, teachers of both swordsmanship and intellectual skills. Euthydemus is also mentioned in Xenophon's *Memorabilia*.[30]

In a conversation between Cyrus and his father in the *Cyropaedia* (I.6.20–21), we are presented with the clearest kind of analysis of successful administrative control over men. Cyrus observes that "it seems to me that in all things the chief incentive to obedience lies in this: praise and honour for the obedient, punishment and dishonour for the disobedient."

Cyrus's father replies, "This, my son, is the road to compulsory obedience. . . . There is another road . . . to what is much better . . . willing obedience." Using examples such as the willingness of the sick to follow the instructions of the doctor, Cyrus's father nails down the point by asserting that "people are only too glad to obey the man who they believe takes wiser thought for their interests than they themselves do."[31] This passage is particularly interesting because it contains a rational self-interest basis for subservience to the expert leader or administrator. It also contains an administrative justification of the importance of voluntarism, considered as essential to an

authoritarian system as it is to the democratic egalitarianism with which it is traditionally associated.

We even find the point about "willing obedience" developed in the extreme case of an absolute despot expounding upon the desirability of voluntaristic service from his subjects. In an imaginary discussion between the poet Simonides and the tyrant Hiero of Syracuse (478–467 B.C.), the case is made for voluntary deference from the ruler's subjects based upon rational self-interest "when everyone of them looks on him as his peculiar blessing" (*Hiero* VII.9).[32] The dilemma of being in a position of authority over *unwilling* subjects is pictured in the closing lines of the *Oeconomicus* as a particular kind of hell: "Tyrannical rule over unwilling subjects, it seems to me, they give to those whom they believe worthy of living like Tantalus in Hades, who is said to spend unending time in fear of a second death."

The argument for basing administrative relationships on self-interest is developed in a slightly different way in the *Cyropaedia* where Cyrus is represented as confronting a defeated, rebellious vassal, the king of Armenia. Upon being asked by Cyrus to state his view of the just treatment of defeated rulers, the Armenian king hesitates.[33] At this point his son, Tigranes, intervenes, and Cyrus gives him his attention because he knows that the young man had been trained by an outstanding savant. Tigranes eloquently advances the idea that Cyrus *in his own self-interest* should not execute his father. His father, Tigranes argues, had, upon defeat, immediately recognized the benefit to be derived from submitting to a superior leader (instantly acquiring "discretion," he terms it). Therefore, in his own self-interest, Cyrus should recognize the benefit of having a subject as willingly obedient as his father has become. When Cyrus questions how his defeated enemy has become so "discreet" so quickly, Tigranes responds by asserting that one acquires discretion not only by defeat by brute force but also by being convinced of the general superiority of the victor, for "the one who is overcome by strength sometimes conceives the idea that if he trains his body, he may renew the combat . . . but if people are convinced that others are superior to themselves, they are often ready even without compulsion to submit to them" (III.1.20).[34] The conclusion is that it would be to the mutual self-interest of both ruler and ruled to accept a relationship where the ruler benefits from the subject's self-interested and voluntary commitment to him and where the ruled has faith in the ruler's superior abilities. The exchange between Cyrus and Tigranes carries us over the same ground covered by Hiero and Simonides and by Cyrus and his father, reiterating the rationalistic premise of mutual advantage between superior and inferior which leads the rational individual to attach himself to a powerful

leader. We also have a hedonic rationalization of dynamic leadership contrasted with simple compulsion.

This rationalistic theme of the teachability of discreet and loyal conduct is discussed not only in terms of personal relationships; allusion is also made to its applicability to cities in their relations with one another (III.1.18). The principle of the reliability of a dependent who is convinced that it is in his rational self-interest to attach himself to a superior in either physical or military strength, or in wisdom and administrative capacity, to advance the common interests of both is developed very clearly in this discourse. This principle has usually been associated with the egalitarian and self-interested relationships premised by the social contract. It is here, however, articulated in terms of the administrative tradition. Xenophon's discussion of Cyrus's treatment of the captured Armenian defector is nominally an analysis of a problem in justice, but it may also be viewed as a problem in administration, in the efficient management of the human element by the "manager" of an empire.

In the *Oeconomicus*, Isomachos discusses the administration of his household in the same terms. Obedience, he asserts (XIV.6), is obtained in one of two ways, by punishment for disobedience and by good treatment for serving eagerly. Human beings, he maintains, can be made obedient "by displaying to them how advantageous it is for them to obey" (XIV.9). Taking some things from the laws of Drakon and Solon and others from the king of Persia, he says, "I try . . . to lead the servants to justice," for the lawgivers "in writing these things . . . wanted to make sure that base profit would not be lucrative for the unjust." Isomachos's aim is "to make the servants just in respect of what they have under their management" (XIV.4–7).

Throughout the writings of Xenophon, there is a clear pattern suggesting a conscious effort on his part to splice into his works instructional passages such as those just discussed for the education of succeeding generations of the upper classes. He seemed to feel that the members of the landed gentry could maintain their position only if they understood that a ruling class must rule, not by relying on compulsion, but by convincing the various layers of Greek society that it would be in their own best interest to follow the privileged leaders because of their superior training and wisdom. In this sense, Xenophon's concept of justice was an extension of his principles of administrative order. While this theme was also characteristic of Plato's writings, it would probably be more historically valid to attribute its source to a common and perhaps ubiquitous strand in early Egyptian and Mesopotamian wisdom literature.

Administered Welfare: Justice, Mutual Advantage, and Incentives

It is not surprising to find in ancient Greek writings rather morphological or shape- and form-oriented concepts of relationships and combinations. This is consistent with their prime system of mathematical abstraction, plane geometry, and with the descriptive and morphological emphasis in their sciences, particularly botany. "Matter," one of Plutarch's dinner table conversationalists insists, "is always struggling to break out into unboundedness, and seeking to avoid being subjected to geometry; but reason seizes upon it and encloses it in lines and marshals it in the patterns and distinctions which are the source and origin of all that comes to be."[35]

Knowledge of the physical world was taken for granted by the Greeks. The human role was to manipulate, arrange, and combine natural elements like pieces of a jigsaw puzzle to achieve desired results.[36] These orderly arrangements, whether of things or people, the ancient Greeks conceptualized in terms of justice, efficiency, and aesthetics. For example, the classic discussion of household management in the *Oeconomicus* is in terms of order and combination. In reference to the specialized attributes of men and women, it is observed that "the nature of each has not been brought forth to be naturally apt for all of the same things, each has need of the other, and their pairing is more beneficial to each, for where one falls short the other is capable" (VII.28). This emphasis on combination for mutual advantage is a recurring theme in Greek literature, including Plato's *Republic* and Aristotle's analysis of the family in *Politics* I, and is not without relevance to modern notions of justice and economics.

Xenophon's use of the beehive as an illustration of the administered economy is another example of the emphasis on order and combination. The queen bee, he writes, "sends them [the worker bees] to the work whenever some are needed to work outside; she knows what each of them brings in, receives it, and keeps it secure until it is needed for use. When the season for using it comes around, she distributes to each what is just" (VII.33).

In the *Oeconomicus* (IV.5–11), Xenophon described the organization of the Persian Empire, where two different officials were given separate economic and military roles, with appropriate rewards and punishments for success or failure in carrying out their responsibilities. One was charged with improving the productivity of the land, the other with defense of the inhabitants. Since the success of each depended upon the efficient performance by the other of his assigned duties, the administrative structure created a system of internal control, with checks and balances, to maximize their respective performances. Moreover, the system provided a source of critical feedback to the

king, since the malfeasance of one official threatened the success of the other.[37]

It is difficult to think of the passages cited above as anything other than generalized statements of the benefits to be gained from organization and the efficient allocation of material and human resources. The piecing together of the various talents of those under one's control, the aggregation of the fruits of their efforts, and the proper preservation and redistribution of these goods clearly constitutes the conceptualization of an economic process. The household accounting system of Isomachos classified articles not only by "tribe" but also by their frequency and occasion of use[38] and was presided over by a housekeeper with a checklist who was told "to give each what he needed of them, to remember what she had given someone, and when she had got it back to return it to the place she had taken it from" (IX.10). The problem for modern economists has been that there is no formulation here of either the production or allocation of goods in response to an impersonal market process. The reason, of course, is that the ancient agrarian establishment was a highly self-sufficient economic unit, obviating the need for all but minimal market activity. It is a pointless quibble to argue over whether pre-market or extra-market processes constitute economic activity, but since modern economics is concerned with both administered production and administered distribution, as well as with the market process, the ancient fusing of the concept of justice and the principles of rational economic administration can be understood.

There is no difficulty in recognizing in Xenophon's writings what seems to have been a very widely known collection of maxims concerning the efficient administration of resources, but the perspective is different from that of more recent economics. Modern economic theory began as the study of the efficient allocation of resources, but two important assumptions have been added: first, the emphasis on material scarcity and, second, the assumption that a natural market process is the most efficient mechanism for the allocation of resources. In the ancient setting, the administrative process, rather than the market, functioned as the intermediary between the production and consumption facets of the economy. In the modern scheme, the individual role is limited to understanding and anticipating market phenomena in the course of rational, self-interested participation in the productive process. For the ancients, the individual administrator was seen as directly manipulating the economic process through his own decisions.

We must defer to a later chapter any discussion of the extent to which the market process was analyzed in ancient Greece. It is enough to repeat here that Xenophon was not primarily interested in commerce, but in the prin-

ciples of organization and leadership. He closes his beehive illustration by adding that the "forethought" of the queen "so disposes the other bees to her" that when she leaves the hive, the workers follow because, he implies, they recognize that their best interests are protected by the queen bee's wisdom and guidance.[39] This is the ideal of persuasive leadership and administration based on rational self-interest.[40] The closest Xenophon comes to a concept of production is when he discusses the role of the administrator in bringing together individuals of different capacities for the mutual benefit of all. Here the emphasis on order and combination is extended to include goal-oriented efficiency in terms of effective social units. In the broadest sense, he is dealing with the productivity of administrative policies.

In the *Cyropaedia*, Cyrus suggests to his father that prizes[41] be offered in contests of "warlike exercises" to "best secure practice in them, so that you would have everything prepared for use, whenever you might need it." His father agrees, adding, "for if you do that you may be sure that you will see your companies performing their proper parts like trained sets of dancers" (I.6.18). This exchange between Cyrus and his father goes beyond the mere selection of individuals with different talents to be combined for mutual advantage. The use of incentives to develop particular skills in the well-established Greek tradition of training and education displays a concern with *effectiveness* and, in some sense, *efficiency*, if not with production in a modern industrial sense, at least in terms of a functioning social unit, a military force.

In the *Oeconomicus* (VIII.3–4) the effectiveness of order is illustrated by its importance in the actions of the chorus and a military body. "There is nothing," Xenophon writes, "so useful or fine for human beings as order. A chorus consists of human beings; when each acts in a chance way, confusion appears that is unlovely . . . a disordered army is a thing of the greatest confusion, the easiest prey for its enemies." This imagery is replete with the contrasting beauty of an orderly chorus and the reassuring spectacle of an orderly army.

On the other hand, Xenophon uses as an example of disorder a farmer who "threw together in the same place his barley and wheat and peas, and then, when he needed barley cakes . . . had to separate them grain by grain instead of having them already distinctly arranged" (VIII.9). He then describes the "finest and most accurate ordering of implements" on a Phoenician galley: "I saw there a great number of implements divided within a rather small space. . . . I noticed that everything is kept in such a way that nothing obstructs anything else or requires anyone to search for it, or is so inaccessible or so difficult to remove as to cause a delay when needed for some sudden use. . . . Indeed, all other things look somehow finer when they are kept in order. Each kind of thing looks like a chorus of implements" (VIII.11–20).

Xenophon extends the concept of order as an element of success from the physical arrangement of things to the effective leadership of men. In a discussion of the importance of leadership in stimulating superior performance by the crew of a ship, he points out that a good leader can cause his men to make a trip in half the time, and that when they leave their oars they will be high spirited, whereas a poorly led crew will perform badly and be sullen and unhappy after the trip is over (XXI. 3). This formulation of a 2:1 quantitative ratio in the performance of properly led men is a repeat of the same maxim (XX. 16–17) with regard to farm work, where diligent supervision that guarantees that men stay busy the full day is said to result in a twofold increase in the quantity of work accomplished. This is true "whether the one in charge is a steward or a supervisor, [for] those who can make the workers eager, energetic, and persevering in the work are the ones who accomplish the most good and produce a large surplus" (XXI. 9).

This is one of the few instances in which Xenophon specifically makes an incremental, quantitative comparison. Most of his discussions center on success in military-type ventures which are in essence qualitative (winning or losing), and not on effectiveness in pursuits where incremental or quantitative increases in return are important. In preparing for a battle, one deals with a zero-sum situation. Preparations are made, troops are trained, and you either win completely or all is lost. Xenophon's outlook in this respect is consistent with the tradition of virtue with its emphasis on success developed in Chapter I. However, in this last instance he elaborates the importance of the leadership art in terms of managerial skills which result in an incremental economic surplus.

In the *Ways and Means*, written toward the end of his life, Xenophon again focuses on incremental gains and combination (men and resources) when he alludes to the efficient combination of productive elements in agriculture as an illustration of his recommendations for the more efficient operation of the silver mines to increase the revenue of Athens: "Every farmer," he writes, "can tell just how many yoke of oxen are enough for the farm and how many labourers. To put more on the land than the requisite number is counted loss" (IV. 5). This is an extension of the idea of "pairing" men with differing capacities to achieve an improved output, but it is here extended to both men and material elements, a "chorus of implements:" men, oxen, plow, and a given land area to be plowed. But it is more than a comment on simple combination for efficiency since he points out that an excess of any one resource "is counted loss." This is a recognition of a marginal element in productive combination.[42]

In modern economic theory, this proper matching of work crews, implements, and work animals would be designated a problem in programming and

a formal mathematical equation applied for its solution, but for most day-to-day situations, simple observation would be sufficient to guarantee an optimum combination. In static societies, most combinations have been institutionalized or even ritualized in many cases so that they resist recombination in response to technological change.

It is ironic that Samuel, one of the few classicists to recognize genuine economic theory in Xenophon's writings, failed to see the importance of the principles just discussed. He asserts that, in the *Ways and Means*, "Xenophon in no way looks seriously at the existing sources of revenue in order to find means of generating increase out of existing activity." Further, he finds "no concept of intensification" and charges that "Xenophon does not even look at operating methods in his search for an increase in revenue." The proposals of the *Ways and Means*, he claims, are based entirely on what he calls "lateral expansion" (increase in overall activity) rather than "any intensification of production or revenue yield." [43]

Other passages in Xenophon deal more directly with augmenting production in the sense of efficient administrative development of inherent economic possibilities. One of the most striking, from the *Cyropaedia* (III.2.17–33), essentially states the theoretical basis for mutual advantage from stability in the form of an administered social contract, anticipating Hobbes. According to Xenophon's presentation of this incident, Cyrus had military control of an area where the Armenians, primarily herdsmen, confronted the Chaldeans, who were an agricultural people. In the past, apparently the Chaldeans had controlled some of the mountain pasturelands in order to protect their farms from being raided by the Armenians, and the Armenians held considerable fertile agricultural land of which they made little use. When the Chaldeans came to make peace, Cyrus asked, "Is this the reason that you, Chaldeans, now desire peace, because you think that since we are in possession of these heights, you could live in greater security if we had peace than if we were at war?"

After the Chaldeans assented to this bit of subjective rationality, Cyrus inquired if they were interested in further improvements of their position, to which they also assented. Cyrus then continued, "Do you think that you are now poor for any other reason than because you have so little fertile land?" When the Chaldeans acknowledged this, Cyrus asked if they would be interested in cultivating as much of the idle Armenian land as they wished, subject to the rental arrangements prevailing among Armenian tenants. To this the Chaldeans replied, "Yes . . . if we could be sure of not being molested." The Armenian was agreeable to the rental of the property since his "revenue would be greatly increased."

Then, addressing the Chaldeans, Cyrus asked, "Seeing that you have fine mountains, would you be willing to let the Armenians pasture their herds here, if the herdsmen would pay you what is fair?" The Chaldeans assented, "for they would get larger profits by it without any labour on their own part." The king of Armenia said he would be agreeable "if I thought I could pasture my cattle there in security."

When both parties indicated that they would not be secure if the heights were in the possession of the other, Cyrus announced: "I shall not give possession of the heights to either of you, but we shall keep a garrison there ourselves; and if either of you does wrong, we shall side with the injured party."

We have followed this account of royal administration in some detail to bring out more sharply the clear formulation of rational subjective advantage implicit in the peaceful pairing of resources between an agricultural people with unused pasture land and a herding people with unused agricultural land. Xenophon avoids the premise that mutual, rational self-interest alone will generate a social contract. In the absence of an umbrella of authority, neither party is willing to trust the other. However, with a wise and strong administrator, the mutual advantage inherent in the relationship can be realized and the idle resources on both sides put to use. Ideally, the rents from the agricultural land would equal the rents for the pasturage, and both sides would find themselves more prosperous, with nothing more than the cost of an annual ceremony to cancel out the reciprocal charges, plus tribute to the "great king." This might be termed administrative economics at the imperial level, as viewed by the Greeks at least, and ostensibly recognized as a policy tradition from the Persian Empire. In support of this presumption, we can cite Herodotus's *Histories* (VI.42) for a reference to the imposition by the Persian Empire in 491 B.C. of arbitration procedures to achieve peaceful relations between the Ionian states a century before Xenophon wrote the *Cyropaedia*, and long after Cyrus's reign.

Modern economic theory, by taking for granted a legal framework, follows the assumption that rational self-interest is a sufficient inducement for mutually advantageous arrangements in open negotiations. This thesis is here rejected by Xenophon in favor of administrative intervention. However, his account of the incident suggests elements of the analysis of comparative advantage or, at a minimum, reciprocal absolute advantage elaborated by nineteenth-century English economists.

A question to which we must return is whether or not this discussion contains a form of production theory, or whether it merely extends the notion of piecing together individual competencies to arrive at an improved total output. At the least, we can say that it extends this latter notion to geographic

regions with different characteristics. It also suggests the rematching of resources, an administrative reallocation to align resource types with the technical or agricultural predilections of farmers and herdsmen. This is still not a theory of production in the sense of producing something new (value added) not already implicit in the natural propensities of people or land. The Greeks seemed to have had a particularly difficult time with such a notion. Their materialist statics were predicated on the assumption that all potential, both material and human, was already in existence. Thus, although they emphasized the importance of training individuals to their maximum, of ordering and allocating material resources, and of combining human and material factors to obtain the greatest inherent potential, they did not conceive of these processes as a form of novation. For them, it was merely evoking through training, ordering, and the administrative framework the potential value already implicit in different combinations.[44] The premise that the production process creates new values (novations) which slips into modern economic concepts of production is a problem that has received little or no methodological and philosophical attention except indirectly in various facets of the labor theory of value and in the Physiocratic thesis of the *produit net* from the bounty of nature.

The essence of economic thinking is a formal concern with the generation and distribution of values of importance to human beings. Xenophon's perspective on the economic process was in terms of administrative authority rather than a market process, but he emphasized the efficient aggregation of resources, both domestic and foreign, including labor in the form of slaves. Although his aggregative approach did not exclude the importance of handicrafts, he did not clearly conceive of industrial manufacturing or production as a means of generating value. In a sense, the Physiocrats, by deriving increased value only from land, perpetuated Xenophon's outlook.

When the use of prizes as an incentive in military training was discussed by Cyrus and his father, only their usefulness in promoting proficiency in military preparedness and coordination was emphasized. In the *Hiero*, where the possibility is discussed of increasing agricultural production by offering prizes to stimulate competitive effort, the observation is made that "no commodities are cheaper than those that are bought for a prize" (IX.11). Here the usefulness of prizes is carried even further as a means of evoking competition to further stimulate higher levels of performance, not only in such areas as horsemanship but in "fair dealing in business" and in agriculture, "most useful of all occupations but just the one in which the spirit of competition is conspicuous by its absence" (IX.6–7).[45] While these observations do not go beyond the basic Greek perspective that what is possible is implicit and only

evoked by human activity, it does introduce a subjective reference to increased returns in response to a minimum, marginal expenditure. We might even go a step further to suggest that the observation recognizes what modern economists refer to as "externalities," benefits or costs which are incidental but external to market transactions and in which parties other than those directly involved in the transactions or the community at large bear the external costs or receive the external benefits. In the case of prizes, the administrator offering the prize induces many to engage in a desired activity but is only committed to award a prize to one. Particularly in eliciting public services, this is an effective administrative device,[46] although the use of prizes has received little attention in economic theory. We can hardly refer to Xenophon's discussion of the use of prizes to stimulate increased performance or production as cost-benefit analysis, but it may have contributed to the legal theory of unilateral contract and rewards.

Turning to the broader question of proper returns to individuals as rewards for performance, we find in the *Cyropaedia* a very specific formulation of the administrative process for determining just deserts. This rather lengthy exposition deals with the distribution of booty in war, but it is part of a tradition which was crucial to the theory of private enterprise as a part of military motivation up to the last century when navy crews still shared in prizes, i.e., captured enemy ships, and privateers were licensed as auxiliary parts of navies.

According to Xenophon, a certain Chrysantas addressed the assembled nobles who were participating in an expedition, pointing out that "some have come out with us who are of superior merit, others who are less deserving than we. Now, if we meet with success, these will all expect to have and share alike. And yet I do not believe that anything in the world is more unfair than for the bad and good to be awarded equal shares" (II.2.18).[47]

Cyrus in his reply shifted the emphasis from status to performance. He proposed a debate[48] on the topic, "shall we give to all an equal share or shall we take into consideration each man's services and bestow increased rewards upon him commensurate with them?" (II.2.18). Upon being urged that he institute the policy by decree rather than submitting to the decision of a public debate, Cyrus said, "You must realize that when men who are united as comrades in war are fully persuaded that nothing will come out as it should unless each individual man exerts himself, then many splendid things are speedily accomplished; for nothing that needs to be done is neglected" (II.3.3). The response to individual incentives was considered by Cyrus to be consistent with the common good. Although participative initiative is an idea usually associated with democratic traditions based upon a system of individual rights, it is here advanced as an administrative principle by an absolute ruler.

Pheraulas, a commoner, makes the point in the debate that the subjective value of a share of booty is much greater to a commoner than to a member of the nobility since "we shall go into the trial not having at stake interests equal with theirs." The commoners, he notes, "risk only a life of toil unhonoured" (II.3.11). Moreover, he argues, the commoners have had superior training in enduring hardships: "there is no better teacher than necessity" (II.3.12).

This debate illustrates the arguments by which the common soldiery could be persuaded to voluntarily accept a distribution of the spoils of war based on an administrative judgment of relative performance even though there seemed to be a tradition of vested rights to a share in booty.[49] The most important aspect of the exposition is the clear presentation of the use of an incentive system rationalized in terms of the potential for and necessity of initiative and participation by the common soldiery to assure success.

The foregoing discussion has focused on *combinations* (of human and material resources) to achieve higher levels of effectiveness. The *division* of labor, to which we now turn, represents another aspect of the structure of economic activity.

The Division of Labor: Quality and Quantity

We have now developed sufficient background to consider the well-known passage in Xenophon's *Cyropaedia* (VIII.2.5–6) in which he deals explicitly with the division of labor. The passage begins and ends with a discussion of the high quality of the food served at the Persian court, which is attributed to the skill of Cyrus's cooks, augmented by the specialization of their efforts. It is important to quote this passage in its entirety, not only because it has been given so much attention, but because so much of the attention it has received has focused on its emphasis on quality.

> For just as all other arts are developed to superior excellence in large cities, in that same way the food at the king's palace is also elaborately prepared with superior excellence. For in small towns the same workman makes chairs and doors and plows and tables, and often this same artisan builds houses, and even so he is thankful if he can only find employment enough to support him. And it is, of course, impossible for a man of many trades to be proficient in all of them. In large cities, on the other hand, inasmuch as many people have demands to make upon each branch of industry, one trade alone, and very often even less than a whole trade, is enough to support a man: one man, for instance, makes shoes for men, and another for women; and there are places even where

> one man earns a living by only stitching shoes, another by cutting them out, another by sewing the uppers together, while there is another who performs none of these operations but only assembles the parts. It follows, therefore, as a matter of course, that he who devotes himself to a very highly specialized line of work is bound to do it in the best possible manner.
>
> Exactly the same thing holds true also in reference to the kitchen: in any establishment where one and the same man arranges the dining couches, lays the table, bakes the bread, prepares now one sort of dish and now another, he must necessarily have things go as they may; but where it is all one man can do to stew meats and another to roast them, for one man to boil fish and another to bake them, for another to make bread and not every sort at that, but where it suffices if he makes one kind that has a high reputation—everything that is prepared in such a kitchen will, I think, necessarily be worked out with superior excellence.

The passage has vexed many writers. Some have seen in Xenophon's comments on the division of labor significant economic distinctions, while others see only commonplace observations. Samuel, who acknowledges that some of Xenophon's work displays "clear evidence of the development of economic theory," views the discussion of the division of labor as a treatment of quality that "has nothing to do with economics."[50] Finley,[51] following Schumpeter's strictures, also rejects the passage as economic analysis. To support his rejection, he cites Schumpeter's observation that scholars "are prone to fall into the error of hailing as a discovery everything that suggests later developments, and of forgetting that, in economics as elsewhere, most statements of fundamental facts acquire importance only by the superstructures they are made to bear and are commonplace in the absence of such superstructures."[52] Samuel, however, terms Schumpeter's stricture "excessive," expecting "antiquity to conform to modern or at least Schumpeter's practices in the use of analysis." He further points out that what Schumpeter really means when he asserts that Greek discussions on economic matters lacked a theoretical superstructure is that they did not have "a theory or analysis of the functioning of the economy as a separate entity."[53] This is not surprising in view of the fact that, as pointed out repeatedly in this study, the Greeks considered the economy an integral part of the social fabric to be regulated in the interest of, to them, important goals such as civic self-sufficiency and human happiness. The notion of the economy as a separate, self-regulating system did not mature until the eighteenth century. What both Finley and Schumpeter fail to see is that, since the mechanism of control in ancient economies was not the market but adminis-

trative procedures, ancient writings framed in administrative terms *do* bear an appropriate analytic superstructure. Indeed, the administrative superstructure is the *only* context in which ancient economic statements could be expected to be framed.

Using Eric Roll's formulation of the "central problem of economic enquiry," Finley takes the position that Xenophon treats the division of labor as a source of improved craftsmanship only, with no grasp of its relation to productivity in a market context.[54] This leap, according to Finley, was not made until Adam Smith, with his famous illustration of the productivity of the pin factory, raised the discussion of specialization to the realm of economic analysis.[55] Finley's assessment of Xenophon rests upon a distinction between qualitative and quantitative productivity and the insistence upon the correlation of the latter with market commerce as the sine qua non of economic analysis. Roll's full statement, upon which Finley relies, is "If, then, we regard the economic system as an enormous conglomeration of interdependent markets, the central problem of economic enquiry becomes the explanation of the exchanging process, or, more particularly, the explanation of the formation of price."[56]

If one's definition of "economics" is limited to the one relied on by Finley, then of course there would be no economic analysis in Xenophon—or in the writings of any other ancient Greek author—for that definition is dependent upon the existence of "an enormous conglomeration of interdependent markets," a kind of economy that was not institutionally structured until the emergence of commercial and industrial capitalism. It thus excludes any possibility of economic analysis in all precapitalist and nonmarket economies. There were no "enormous conglomerations of interdependent markets" in ancient Greece.[57]

It is clear, however, that Xenophon's comments on the division of labor were consistent with his use of *oikonomikos* (*oeconomicus*), which Finley elucidates as combining *oikos*, a household, with the root, *nem-*, to "regulate, administer, organize."[58] Economists to this day are not in unanimous agreement as to the scope of their discipline, some limiting it to market and price phenomena, while others extend it to efficiency criteria in any field, even to such areas as the "economics" of crime or education or health care or, more generally, to such administrative procedures as cost-benefit analysis. These latter perspectives would not exclude Xenophon's administrative approach from the field of economics. Our contention is not, however, that Xenophon used the exchange process as a point of departure for his analysis (or observations) but that he analyzed an administrative process which performed some of the same functions as the market.

It is important to take note of Xenophon's probable influence on modern economic analysis, whether or not his writings are classified as such. For example, his discussion of the improved quality resulting from specialization in the context of skill achieved by the king's cooks carries the idea into an analysis of the relation between population concentration (the extent of the market) and the development of skills in the carpenter's trade through specialization. This idea, as we shall see, may have contributed to Adam Smith's proposition that the extent of the market limits the division of labor. Although the significance of Smith's correlation of the division of labor with increased productivity in the pin factory is widely accepted, the recent discovery of a detailed set of dated notes on Smith's 1762–63 lectures on jurisprudence has focused attention on the more fundamental premise, which Ronald Meek and Andrew Skinner refer to as "the crucial principle that the division of labour is limited by the extent of the market."[59] They believe that the fresh evidence presented by the new set of notes has allowed them to pinpoint the precise week in which Smith made the analytical breakthrough that has been called "the methodological bridge between the first concept of labor's division and the larger scheme of [the *Wealth of Nations*]."[60] Meek and Skinner note that the new material on the extent of the market introduced on April 5, 1763, six days after his last lecture, was out of the normal context of exposition—we may assume as the result of some novel insight. No one knows the source of Smith's sudden linking of the extent of the market with specialization and the division of labor, but there is a striking resemblance between the first part of the passage quoted above from Xenophon's *Cyropaedia* and a passage from the new notes on Smith's lecture:

> We may observe . . . that as the division of labour is occasioned immediately by the market one has for his commodities, by which he is enabled to exchange one thing for every thing, so is this division greater or less according to the market. . . . The being of a market first occasioned the division of labour, and the greatness of it is what puts it in one's power to divide it much. A wright in the country is a cart-wright, a house-carpenter, a square-wright [door maker?] or cabinet-maker, and a carver in wood, each of which in a town makes a separate business.[61]

The similarity of the examples used by Xenophon and Smith should be noted. Both used the trades of door maker, cabinet or furniture maker, and the builder of houses. Moreover, the crucial statements about the extent of the market are almost identical.[62] Xenophon's statement (VIII.2.5) is that "In large cities . . . inasmuch as many people have demands to make upon each branch of industry, one trade alone, and very often even less than a whole

trade, is enough to support a man." Smith's more economical statement of the same point, after he lists the trades, is that "each . . . in a town makes a separate business."[63]

Although this correlation may not be specifically supported by the circumstantial evidence of the presence of Xenophon's works in Smith's library at the time of his death thirty years later, the general credibility of the suggestion is supported by Charles R. Fay's judgment that both the *Theory of Moral Sentiments* and the *Wealth of Nations* were influenced by the classics.[64] William R. Scott's work[65] also supports this thesis.

It is difficult to understand how the shoe manufacturing process using standard parts and assembly-line techniques described by Xenophon could be considered as merely a system for improving craftsmanship. Even if the purpose of the process as carried on by the ancients was only to produce shoes of superior quality, could Xenophon have been oblivious to the quantitative efficiency that necessarily resulted? If there were no other discussions in ancient literature that took cognizance of increased productivity through improved craftsmanship or administrative expertise, such a view would be more persuasive. But, as I have pointed out, the whole theme of Xenophon's *Oeconomicus* is that the organization of activity in terms of spatial distributions and improved human interaction and leadership results in greater success and output, whether from the land or from a crew of oarsmen or, in aesthetic terms, from a chorus (all Xenophon's illustrations). Moreover, his frequent references to self-interest in all of his works suggests a familiarity with Protagoras's development of the hedonic calculus, discussed in Chapter II, which carried quantitative distinctions to a high level of precision in measuring subjective values. Furthermore, Plato clearly understood quantitative efficiency when he recommended the division of labor in the *Republic* (370c), observing that "more things are produced, and better and more easily when one man performs one task according to his nature." Aristotle's comments on public administration in the *Rhetoric* (1359b20–25) reveal a clear and systematic approach to the quantitative inventorying of assets and revenues. We may thus question Finley's assertion that, in regard to calculations of increases in quantity, "no one has yet discovered a sentence in any Greek or Roman writer that makes such a calculation."[66]

Since physical reality is easily observed (accepted as a given), Xenophon felt that the facts of nature did not require analytic attention. His approach to the division of labor was from the administrative perspective of managing the human component, which he considered the crucial element in any undertaking. In fact, the final chapter of the *Oeconomicus* is dedicated to the development of this point and, moreover, is framed in the context of quantitative

returns in agriculture. Addressing his attention to farm managers who "all know equally well what ought to be done," he asks, "how is it that all do not do equally well, but rather some live in abundance and have a surplus, while others cannot even provide the necessary things but run into debt besides?" (XX. 1). The answer is that diligence "rather than the fact that some seem to have invented something wise for use in the work" (XX. 5) is the cause of the difference in returns. Xenophon thus placed the human variable above even improvements in technology.

If the material environment is fixed, the primary means by which returns can be increased is by applying leadership and diligence to improved combination, i.e., by putting existing elements together in new or better ways. This may involve qualitative thresholds, but quantity is clearly a consideration in some of Xenophon's illustrations, for example in Cyrus's imposed structuring of the Armenian-Chaldean adjustment in the use of their idle resources. That discussion is about as overt a treatment of improving income by expanding specialization as one can find, although it is couched in an administrative context of induced efficiency in the utilization of idle resources rather than in a laissez-faire market setting. One can probably safely generalize that Xenophon and his contemporaries did not systematically distinguish between the economic importance of quality and quantity, both of which provided economic returns, just as they failed to distinguish systematically between success and efficiency in their materialistic value tradition, primarily because their attention was focused on the human factor as the crucial determinant of results.

Xenophon's View of Nature and the Human Measure of Value

The basic picture of the decision-making process that emerges from Xenophon's writings is one of an exceptional individual exercising the "royal art" in managing an agrarian estate, captaining a ship, or leading a military detachment. Nature, in the milieu in which he operates, is easily discernible and intelligible so that adjustments can be made to improve the individual's beneficial relationship with the physical world. Slaves and non-Greeks are regarded as elements in the natural process, just as livestock might be treated as an extension of the productive potential of the soil.[67] The individual in a decision-making role is seen as administering or organizing the elements, primarily human, over which he can exercise some control through choice or combination in order to extract the most from a natural potential. In his economic role, he thus confronts the forces of nature, not the forces of a competitive economy.

In modern neoclassical economic theory, on the other hand, the economy is treated as a self-regulating mechanism which not only needs no administration or manipulation (by either individuals or government) but which may even be damaged by such interference. The decision-making individual, however, is expected to analyze the economic process and to adjust his personal conduct in order to benefit from the vagaries of the economy. The "natural" economy is defined as the aggregate of such individual activities, with each individual competitively seeking to maximize his own self-interest. Wealth is created through the interaction and application of industry, entrepreneurship, and labor to the resource base of an economy.

Xenophon's view of the world was much simpler, essentially one in which individuals dealt acquisitively or manipulatively, not with the forces of an economy, but directly with the open book of nature. While this view hinders a concept of wealth *creation*, it does not impair a concept of the *augmentation* of wealth, a kind of shepherding of the natural processes. As noted earlier, one of the prime problems of modern economic theory has been to explain the origin of additional wealth associated with economic activity in an ideological and ethical setting where private property rights are paramount and new or created wealth in the economy is a subject of legally justifiable appropriation. For Xenophon, the problem did not exist because he viewed the individualized appropriation of goods from nature as natural in itself.

Xenophon's views on nature and subjective individualism were not isolated expressions. They reflect the contemporary intellectual milieu which included Democritean materialism and Protagorean relativism. Democritus (Frg. 176) characterized nature as "self-sufficient" and her resources as "reliable,"[68] indicating a perception of nature as a stable reference base. Xenophon's view of the exercise of managerial discretion as the efficacious combination and coordination of diverse elements into manageable order to achieve a desired objective is but a pale reflection of Pindar's perspective on nature. Pindar felt, according to Bruno Snell, that "it is up to the wise man to show that the world discloses its greatest beauty in the wealth of its correlations, through its correspondences and contrasts; nay, that the essence of this beauty resides in the agreement and balance of its parts."[69]

Xenophon's simple naturalism is expressed clearly in the *Memorabilia* in a conversation between Socrates and Euthydemus. After pointing out that some men live entirely from the utilization of animals provided by the gods for man's use, Socrates suggests that this direct use of natural forms may exceed agriculture in importance, and that it is augmented by the ability of man to tame animals and to use their superior strength in achieving his own pur-

poses. Socrates continues: "Think again of the multitude of things beautiful and useful and their infinite variety, and how the gods have endowed man with senses for the perception of every kind so that there is nothing good that we cannot enjoy; and again, how they have implanted in us the faculty of reasoning, whereby we are able to reason about the objects of our perceptions and to commit them to memory, and so come to know what advantage every kind can yield, and devise many means of enjoying the good and driving away the bad; and think of the power of expression which enables us to impart to one another all good things by teaching and to take our share of them, to enact laws, and to administer states" (IV.3.11).

This passage fairly neatly sums up Xenophon's general formulation of the economic process: intelligent man using perception and reason to extract from a discernible and available nature[70] the wherewithal to satisfy his needs and to avoid discomfort. Accumulated wisdom[71] and the training of others permits organization and administrative efficiency. While Xenophon in other passages emphasizes leadership as the process by which the optimum potential can be extracted from men, in this part of the *Memorabilia* he shifts his emphasis to the moral commitment to put forth one's best efforts. He recalls Socrates quoting Hesiod's *Works and Days* (336), "According to thy power render sacrifice to the immortal gods," and adding "in our treatment of friends and strangers, and in all our behavior, it is a noble prineiple to *render according to our power*" (I.3.3–4). This idea is alluded to in the *Oeconomicus* (VII.16) when Isomachos, on being asked by his wife what she can do to improve their property, responds, "Just try to do in the best manner possible what the gods have brought you forth to be capable of and what the law praises." It is the same idea inherent in Plato's "natural" division of labor and in Marx's famous adage, "from each according to his abilities, to each according to his needs."

"Render according to our power" introduces a moral reinforcement of a sense of duty to optimize the potential on the human side of the man/nature equation. It suggests a reciprocal response to the efforts of the successful leader in eliciting the individual's best efforts, a moral precept congenial to the administrative tradition. However, Xenophon supports this moral commitment with a subjective, hedonistic rationalization when he admonishes a listener to "follow the custom of the state" and to exercise "prudence" in pleasing "those who can confer the greatest benefits" (*Mem.* IV.3.16–17). What is interesting about this passage is that it blurs the religious obligation to perform to the utmost for the sake of the gods with the obligation "prudently" to perform to the utmost for one's superior. It revives the traditional god-king duality

that had characterized the authoritarian administrative tradition for over two thousand years but was eroding during Xenophon's time. It is an expression of the *duty* tradition, not a concept of *rights*.

The image of the economic process presented by Xenophon's Socrates contrasts fundamentally with that found elsewhere in the *Memorabilia* and in the *Cyropaedia* and *Oeconomicus*, where administrative leadership and insight are lauded. Socrates not only adds a moral duty component to the administrative side, he also adds a mystic element to the natural base: here the "good gifts" presented by the gods "for our use, and quicker than thought to serve us unerringly," are "unseen by us in the ordering of them" (*Mem.* IV.3.13–14). We cannot call this a precise allusion to the "invisible hand" in a Smithian sense because the natural order described here is couched in physical terms, with man's functions, including reason and teaching, treated more as reflexive expressions of innate capacity than as interactions of choice in the market setting to which Smith alluded. Moreover, the concept of natural law is raised to a proto-religious level when Socrates reminds us that even the benign sun blinds those who try to inspect it too closely, suggesting that we should attempt to understand natural processes only by their manifestations and that we should respect and honor their mysterious ways. This is not quite the open book of nature found in the *Oeconomicus*.

In a subsequent passage of the *Memorabilia*, there is a discussion of natural law in which the legal system is pictured as containing a self-regulating mechanism similar to the laissez-faire concept of a self-regulating economy. "Unwritten laws" are described as "those that are uniformly observed in every country" and attributed to the gods because men "cannot all meet together and do not speak the same language." They are enforced by peer pressure, for example in the "duty of requiting benefits." The laws, therefore, "involve in themselves punishment . . . for those who break them" (IV.4.19–24) a loss of social status. This paradigm of a self-regulating natural law process contains a pattern for a subsequent analysis of a self-regulating market, although the only hint of this in Xenophon is the reference to the "duty of requiting benefits," a suggestion of a natural law of exchange or reciprocity.

Xenophon's Value Theory

As has been mentioned, one of the prime elements relied upon by Xenophon in analyzing the administrative process was the principle of self-interest, a concept which was later developed as an important cornerstone of the theory of the self-regulating market. In the *Oeconomicus*, where the qualities of a good farm manager are discussed, the question is raised whether "men who

are in love with profit" would be good candidates. The reply is emphatically affirmative, it being only necessary for the administrator "to point out to them that diligence is profitable."[72] The best trainees are apparently those who are "temperate lovers of profit" (XII.15–16), presumably because they are not as likely to be tempted to serve their own interests at the expense of their master's.

The emphasis on the incentive of self-interest to accomplish administrative objectives is a facet of the broader hedonism generally attributed to Protagoras. This subjective individualism dominated Xenophon's approach to value theory. Such a point of view tends to measure things in terms of an individual's subjective appraisal of their usefulness rather than in terms of some other criterion, such as esthetic or market value.

In the *Memorabilia*, Socrates remarks that "all things are good and beautiful in relation to those purposes for which they are well adapted, bad and ugly in relation to those for which they are ill adapted." Houses, he says, should be "both beautiful and useful" (III.8.7–8). In a later passage, Socrates is more explicit when he asks whether "what is useful is good for him to whom it is useful" and whether it is possible for a thing to be "beautiful for all purposes." The conclusion is that "beauty in using anything consist(s) in using it for just that purpose for which that particular thing is useful" (IV.6.8–9).[73]

An example of Xenophon's use of subjective value (and diminishing utility) is found in the *Hiero* (I.17–19), where the tyrant observes that "most men judge that we have more enjoyment in eating and drinking than private citizens," but he adds, "the greater the number of superfluous dishes set before a man, the sooner a feeling of repletion comes over him; and so, as regards the duration of his pleasure too, the man who has many courses put before him is worse off than the moderate liver."

The general statement of use value, however, is found at the beginning of the *Oeconomicus* where it is made clear that Xenophon is using the term "household" to refer to a generalized concept of wealth. The "household" is there defined as "whatever one possesses . . . even if it isn't in the same city as the possessor" (I.5). When the objection is raised that people also "possess enemies," it is seen that the definition must be qualified with some criterion of value. This, it is agreed, is benefit or usefulness to the possessor. It is further agreed that "if someone buys a horse he doesn't know how to use and hurts himself in a fall, the horse isn't wealth for him." The analogy is carried to land not being wealth "for the human being who works it in such a way as to suffer loss in working it" (I.5–6, 8).

The distinction Xenophon is making here is between the idea of a purely individual subjective measurement of value and a more objective concept of "wealth" or property. Not only with land, but with sheep herding, if a man

loses money because he doesn't know how to manage sheep, they are not a souree of wealth. The definition is evolved that "whatever benefits is wealth, while whatever harms is not" (I.9). This subjeetively relativistie statement is made elearer by its being pointed out that the same objeet ean be either wealth or not wealth, depending on the eapaeity of the owner to make benefieial use of it. For example, a flute is defined as being of value to those who ean play it, but of no more worth than stones to those who eannot. For sueh persons, flutes are wealth only if they know how to sell them, for "unsold flutes are not wealth, for they aren't useful, but sold ones are wealth." However, it is pointed out that even selling objeets one eannot use does not bring wealth if what one reeeives in return is not useful. Even money, it is implied, is not wealth if not employed in a useful way, for example, by spending it "to buy a prostitute" and through her becoming "worse in body, worse in soul, and worse in regard to [one's] household" (I.9–13). Xenophon's emphasis on usefulness as the eriteria for exehange value is eonsistent with Aristotle's theory of the natural limit on aequisition, to be diseussed in Chapter VIII.

The exposition in the *Oeconomicus* drifts into a treatment of the primary importanee of the effieient and proper use of what one has as opposed to unorganized or ehaotie use of property that results in ineffieieney (III.2). The subjeetive measure of wealth is earried further when it is suggested that one who is eompletely satisfied with very little may be rieher than one who has mueh but is still desirous of more. Soerates points out that his total possessions would bring possibly five minas (if he eould find a good buyer), yet he maintains, "My things are suffieient to provide enough for me" (II.4).[74]

This referenee to a selling priee in terms of a negotiation with only one buyer reminds us that Xenophon thought of exehange in terms of individual transactions (isolated exchange), not in terms of an established market. This individualization of exchange priee is charaeteristie of market situations where nonuniformity of goods blurs any presumptive priee to be derived from the market process. It places a premium on the skill of the seller in bargaining and maneuvering for a good sale. What Xenophon reeognizes is that the highest measure of an individual's subjeetive use value may be the subjeetive use value goods have for some other member of the eommunity to whom they may be sold. If skill in bargaining is substituted for the owner's laek of skill in use or the need for a eommodity, a broader dimension is introdueed, but priee is still dependent upon the skill of the seller and his good fortune in finding a buyer willing to pay a higher priee.

Another faeet of isolated exehange is suggested in Xenophon's *Cyropaedia* (I.3.15–17) when Cyrus reeounts how he was onee flogged by his teaeher for a deeision he rendered in a eontroversy between two of his sehoolmates. A tall

boy with a short tunic, it seems, forced a short boy with a long tunic to exchange garments. Cyrus ruled that the exchange should stand since both boys ended up with better fitting tunics (a kind of Pareto optimum with total welfare increased). His teacher, however, stressed that Cyrus had not been asked to judge the fit of the tunics but "whose title was the rightful one" and "whether it was right that he who took it away by force should keep it, or that he who had had it made for himself or had bought it should own it." Apparently mutual advantage, by itself, was not considered sufficient to support a fair exchange. Individual property rights in goods also had to be recognized, and, implicitly, an exchange, to be fair, should also be voluntary. The focus in Xenophon's writings on isolated exchange, where a judicial determination of fairness or value would be appropriate, reminds us that some of the theoretical elements of exchange may have been developed without a theory of market price.

A *Summary of Xenophon's Economics*

It is clear from Xenophon's *Oeconomicus* and *Memorabilia* and from Plato's *Euthydemus* that there was a clearly defined body of knowledge relating to administrative problems in the late fifth century B.C. These ideas have generally been translated into English as "the royal art," "household management," or "estate management." They might possibly be translated as "the patriarchal art" or "the leadership art," according to the context. It would be more general and more consistent with the overall setting of the discussions of this concept to use the modern terms "administrative" or "managerial" art.

This administrative art is clearly defined at the very beginning of Xenophon's *Oeconomicus*, after which the discussion moves directly into an elaboration of use value. The key behavioral premises upon which this analytical structure was based were hedonism and its corollary, subjective use value. Given the social structure of the times, these perspectives tended to reinforce elitist individualism and formed a barrier to a socially oriented concept of the economic process. Following these premises, self-interest and individual subjective use value were coalesced into a primary measure of the value of goods. Protagoras's maxim, "man is the measure of all things," is an expression of this outlook and was consistent with the general anthropocentric viewpoint of ancient Greek thought. Modern economic theory, while accepting the main premises upon which the administrative art was based, recognizes the impossibility of making interpersonal utility comparisons and concludes that, in isolated exchange, the price determined by two parties, each "hearing a different drummer," is rationalistically moot. Any price that suits both parties is ra-

tional and fair. The legal maxim that a fair price is any price freely arrived at by a willing buyer and a willing seller, which point was illustrated by Xenophon with the story of the exchange of tunics between the tall boy and the short boy, is the jurisprudential expression of the principle of isolated exchange.

Why a theory of the self-regulating market did not develop in ancient Greece from empirical observations of the commercial life of such great entrepôts as Athens or Corinth may be a valid question. Xenophon did comment on some of the economic problems of Athens in the *Ways and Means.* It might be suggested that, because of changing political conditions and shifts in supply, demand, and technology, as well as ubiquitous administrative regulation, the concept of a self-regulating market could not have been extrapolated from the commonplaces of short-run supply and demand adjustments. The concept of a market process requires one to look for a coherent, overall pattern and to ignore short-term aberrations. Plato's notion of "ideal types," a theory of a rational prototype underlying seemingly discontinuous and imperfect patterns in observed phenomena, may have been a necessary step toward a theory of market process.

The furthest Xenophon went toward developing a theory of exchange value was the recognition of a social context for use value, that the ability to sell an item for which one has no use extends the scope of personal usefulness to incorporate a more general social use value derived from the existence of a marketing opportunity. He thus extended the theory of use value to include exchange, rather than deducing individual exchange values from a concept of general market value. His "administrative art" was applied in a microeconomic way to the problems of efficient estate management. However, he extended these principles in the *Ways and Means* to a macroeconomic perspective when he dealt cogently with the problems of urban and commercial policy appropriate to stimulating large-scale mining and to increasing commercial activity at the port. He recommended public subsidization of a larger labor pool in the first instance and improved legal, social, and residential amenities for resident alien traders (*metics*) and visiting merchants in the latter.

Basically, Xenophon's writings were directed to the problems of the administrator in organizing materials and/or personnel into effective, functioning units. Productivity was conceived in terms of improved organization to extract the fullest measure of potential from the resources at hand. Both punishment and incentives in the form of rewards, prizes, and honors were clearly defined devices recommended for effective administration. Administrative purposes could be further advanced by utilizing rational self-interest in both training personnel and in improving the economic conditions of subjects (the

Armenian-Chaldean adjustment). With nature conceived as an open book, beneficial adaptation was clearly dependent upon the development of the human element.

One can see how this administrative perspective could flow into a concept of efficiency in commercial ventures by considering Xenophon's report of Socrates' discussion with the Syracusan impresario in the *Banquet* (VII. 1–5). Accepting the Syracusan's appellation as a theorist, Socrates replies that "I am indeed a 'thinker'" and proceeds to analyze the "economics" of the entertainment business. "I am considering," he says, "how it might be possible for this lad of yours and this maid to exert as little effort as may be, and at the same time give us the greatest possible amount of pleasure in watching them—this being your purpose, also, I am sure." He even discusses the minimization of hazards ("turning somersaults . . . among knives") which add little to the aesthetic quality of the performance, a marginal concept. Socrates here formulates an efficiency criterion for achieving a commercial objective in specifically quantitative terms, albeit without any reference to market price.

IV Plato as Theologian of the Administrative Tradition

Come, then, let us create a city from the beginning, in our theory. Its real creator, as it appears, will be our needs.
—Plato (*Rep.* 369c)

In contrast to Xenophon, who was primarily concerned with the practical aspects of policy and leadership, Plato took nothing less than the whole state, with its political and economic structure, as his burden. Although he approached this large problem in terms of individual responses and motivations, his overall interest was in the definition of the proper objectives of the state and the need for efficient administration and internal control that would insure its ultimate success, or at least its approach toward what he considered the perfection implicit in the Ideal Form of the state.

Plato's Theory of Administrative Order

The *Republic* is Plato's most famous dialogue and has probably had more influence on popular thought than any other ancient Greek work.[1] It presents Plato's hypothetical model of an ideal state, a model designed to permit maximum utilization of human intelligence and capacities in the achievement of what he conceived to be optimum order and social excellence. It is an exposition of how things should be if one were setting up the *best* and *most efficient* political economy for the orderly generation and distribution of wealth.[2] The central problem of the *Republic* is the maximization of individual and social happiness. In asking whether justice is a good in itself, Plato raises the question of whether the pursuit by each individual of his own moral best interest will result in the best social order. The question is answered in the affirmative, postulating a kind of moral invisible-hand doctrine in which each individual intending only his own gain, is led, like Adam Smith's economic man, "by an invisible hand to promote an end which was no part of his intention," social happiness or the "public interest."

It will be remembered that Plato was writing in the shadow of the Periclean age and that the establishment of colonies by Greek city states in the Mediterranean during this period was a well-developed process. One of them, the colony of Thurii founded in Magna Graecia (southern Italy) in 443 B.C., was to be an ideal panhellenic community with settlers from all parts of Greece. In the establishment of this "new town" the intellectuals had an opportunity to demonstrate their skills in devising ideal systems. Its physical layout, according to tradition, was designed by Hippodamus, who had been responsible for planning the Piraeus, Athens's fortified port. The laws of Thurii were reputedly drafted by Protagoras,[3] the most famous political teacher of the fifth century B.C. and adviser and confidant of Pericles. There is also the account of the utopian society of Atlantis presented in the dialogue *Critias*. The story was allegedly brought by Solon from Egypt, where it had been recounted to him by Egyptian scribes.

With this limited background, let us make several general statements about the political economy structured in the *Republic*, as an overview for looking more closely at the specific theories Plato develops in this and other works to support his notions about the ideal political economy or just order. Framed as an attempt to define justice, the *Republic* evolves as a description of a system for the proper ordering of society at the most efficient level. As in Xenophon, the administrative problem is here posed as the application of administrative expertise or organizational skills to a discernible nature, with special emphasis on the human element as the variable factor in the administrative process. However, unlike Xenophon, who emphasized leadership skills in recognition of the practical necessity of inducing participative support for the objectives of the administrator, Plato relies almost exclusively on an overall rational design by a superior intelligence and a presumption of a willingness to obey based on the subject's own self-interest in submitting to authority. Under the enlightened direction of the administrator, each citizen will perceive the rationality of performing his assigned duty.

Plato's objective is to piece together the geometric elements of society into a perfect combination that will constitute the just and orderly political economy. Reflecting this outlook, an inscription over the door of the Academy proclaimed: "Let no one enter here who is not a geometer."[4] He chides Callicles (*Gorg.* 508a) for overemphasizing self-interest and neglecting geometry. He advocates (*Rep.* 526c) that the rulers of his state study geometry since he conceived of the administrative process, at both the political and cosmological levels, as one in which rational, geometric order is imposed upon an amorphous subject matter by the philosopher-king, in the first instance, and God in

the second.[5] In one of Plutarch's dinner table conversations (*Mor.* IX.720B), it is asserted that God's intention was "so far as possible, to leave nothing unused or unformed, but to reduce nature to a cosmos by the use of proportion and measure and number, making a unity out of all the materials which would have the quality of the form and the quantity of the matter." Plato's view of an optimum politico-economic system as one which harmonizes in a general equilibrium the needs and capacities of the individuals who make up the state under the benign authority of an intelligent leader is not very far from the basic character of the archaic patriarchal family structure. It is also reminiscent of the ancient tradition of the semideified lawgiver who brings order to a community.

The society of the *Republic* is a static, self-sufficient one based on the principle that everything and everybody has one best function.[6] There is no reliance on a theory of economic growth, nor any consideration of a developmental process or evolution by which these best uses are worked out, nor an explanation of how society might evolve toward this system. In Plato's view, the design of an orderly community depends, not on experimental interaction between individuals, but on the wisdom and acumen of the prime intellect in the society who uses reason to work out the optimal order for the community. Social process is thus a deduction from the intellectual process, i.e., rationality or "right reason." Once the optimum is achieved, no change is anticipated since change from the optimum could only mean retrogression. The static nature of Plato's administered utopia is deduced from his theory of Forms, that there are in the universe "blueprints" of optimum possibility comprehensible by reason, the "best" reason. Alvin W. Gouldner's description of this static world is apt: "The Platonic universe runs in an eternal cycle of forgetting and remembrance in which nothing new is ever learned. It has no real creation or creativity, no true novelty and growth. There is only the endless pouring of materials into the ageless mold of the Forms and the endless corruption of the casting."[7]

The mandated division of labor in the *Republic* provides the natural base for Plato's static society. The capacities of children are determined at birth, and they are trained to fulfill their best role—and no other role—in the economy and society at large.[8] This, Plato thought, would coincide with the best, the most efficient economic order. The division of labor in the *Republic* has been much discussed by economists but, as was pointed out by Paul J. McNulty,[9] Plato's division of labor is not a theory of the adjustment of individuals to achieve effective exchange positions but is rather a theory of inherent natural differences to be used as the basis for the assignment of individual tasks.[10] Both the productive and distributive functions in the economy of the

Republic are directed toward a system of rational perfectibility predicated on an assumption of optimal efficiency. Stanley Diamond observed, "Plato not only sensed the congruence of the elaborate division of labor with state organization, but carried it to its furthest reach, and then gave it the name of justice."[11]

The task of the *Republic* is to develop the argument that there is a valid standard of political and economic organization which acquires a moral dimension because it will achieve optimum efficiency and order consistent with an ostensibly value-free, rational "blueprint" of a perfect society. Since the perception of the "blueprint" is limited to only a few, their recommendations have moral force and their guidance toward this objective should be accepted by the majority. Plato's dilemma, however, was that if the majority cannot be expected to understand how to achieve the most efficient approximation of the ideal state without guidance by a superior intelligence, neither can they be expected to choose the best leaders who are able to understand the "blueprint." The leaders, therefore, would have to be self-appointed and guided only by the order and justice in their own souls in achieving order and justice in the political economy. Relying on the popular legal principle that no one voluntarily acts against his own self-interest, that is, is unjust to himself, Plato described the hedonic motivations of individuals as being primarily dedicated to the achievement of inner peace (an ordered and just soul) in which reason regulates the appetites and passions.[12] In this way he was able to provide a moral rationalization for the orderly participation of individuals in the economy and the state in subservience to the guidance provided by the philosopher-king.

The frustration for Plato remained that the popular mind was not always capable of understanding the benefit to be gained from accepting the guidance of competent authority.[13] Consequently, he incessantly returned to the problem of the teachability of "virtue"[14] and the achievement of justice, and it would be well to keep in mind his special usage of the concepts. For the individual, the practice of "virtue" means placing rationality ahead of physical and emotional needs in order to function prudently or excellently in organized society. The moral ordering or harmonizing of the inner self of the outstanding individual who is capable of attaining "true knowledge" and inner justice will provide a prototype for lesser individuals to follow. "Justice" ultimately is the particular order that Plato envisions as the most efficient for the successful political and economic life of the community. These meanings are clearly implicit in his use of the terms in the dialogues.

Plato's irritation at the failure of the public assemblies and law courts to accept what he considered to be rational leadership drove him to suggest (*Rep.* 489b–c) that, just as "it is not the natural course of things that the pilot should

beg the sailors to be ruled by him," neither should the wise ruler "implore his natural subjects to let themselves be ruled." On the contrary, the superior leader should stand aloof, for those who need to be governed must go "to the door of the man who knows how to govern." Plato constantly displayed disdain for democratic institutions such as the assemblies and law courts which required the intellectual leader to convince large numbers of fellow citizens. He speaks with contempt of the public as "the great beast" (*Rep.* 493b) or as the "rabble at large" who show no concern for "the judgment of [their] betters in the assurance which comes of a reckless excess of liberty" (*Laws* 700c, 701b). He confined his debates, he said, to a few individuals at a time. "With the many," he said, "I will not even enter into discussion" (*Gorg.* 474a–b).[15]

Political Prerequisites of the Just Society: Excluding the Unacceptable

In both the *Republic* and the *Gorgias*,[16] Plato investigates the system of authority or process necessary for the management of a just society (a political economy). He approaches the problem by systematically examining various possibilities for decision making, excluding each in turn while at the same time proffering ethical individualism as the only possible basis for order and justice. Excluded from acceptance in the *Gorgias* are majority opinion arrived at by public debate, raw power, and natural law. The argument of the *Gorgias* ultimately focuses upon the question of whether there is a self-regulating component or internal dynamic in society that can be set in motion to guarantee a stable and desirable politico-economic system, a possibility for which Plato finds no hope. In the *Republic*, material self-interest as a guide for social governance is likewise rejected and Plato concludes that, since no self-regulating mechanism exists to assure a just society, a social order will have to be imposed by "experts," guided by an ethical commitment to discover the "right" path or the "good."

At the beginning of the *Gorgias*, Socrates is engaged in a discussion with one of the most famous of the Hellenic sophists who was renowned for the teaching of rhetoric. Socrates elicits from Gorgias the definition of rhetoric as "the kind of persuasion employed in the law courts and in other gatherings . . . and concerned with right and wrong" (454b). Gorgias is then led to agree to the proposition that "knowing" and "believing" are different and, further, that teaching "belief" is not the same as teaching "knowledge." Armed with this admission, Socrates nails down his point, to which Gorgias is represented as acquiescing: "Shall we lay it down that there are two forms of persuasion, the one producing belief without knowledge, the other knowledge?" Socrates

continues, "Now which kind of conviction about right and wrong is produced in the law courts and other gatherings by rhetoric? That which issues in belief without knowledge, or that which issues in knowledge?" Gorgias replies, "That which issues in belief" (454e).

At this point in the dialogue, it is taken as established that rhetoric is not a process that will produce "right" decisions. That, it appears, would require "true knowledge." Rhetoric, it seems, can only result in "belief," which is different from knowledge. What Socrates has done here is to carry Gorgias through a chain of admissions which establishes that the decisions of the law courts and public assemblies, the hallmarks of the democratic process in Athens, are based on "belief" without "knowledge," with the implication that the decisions or "beliefs" produced by public processes are not securely based on "knowledge." Socrates avoids the obvious conclusion that belief can be coterminous with reality or overlap it partially, as well as being inconsistent with it. Subjectively, belief and knowledge are indistinguishable, but, if an objective standard can be established, some beliefs may be shown to be true and some false. The argument continues with Socrates indicating that the process by which "true" knowledge of proper policy can be arrived at involves instruction, not persuasion, and that it is necessarily restricted to a very small  circle, for a rhetorician "could not instruct so large a gathering in a short time about matters so important" (455a).[17]

We must keep in mind that we are here dealing, not with philosophical subjects, but with economic, political, and legal issues resolved in the law courts and assemblies, and with the rightness or wrongness of such decisions. Socrates rejects the proposition that in a democracy persuasion is a subset of the instructional process aimed at public knowledge, a competitive art used in the public dialectic by which social consensus is achieved in the law courts and assemblies. Instead, he pictures rhetoric as a process used to subvert the influence of the true expert. The rhetorician, he asserts, "has no need to know the truth about things but merely to discover a technique of persuasion, so as to appear among the ignorant to have more knowledge than the expert" (459b–c). Rhetoric or public persuasion is thus rejected as a process that in and of itself will lead to valid social consensus and proper order.

Having repudiated public debate as a process for producing valid policy, Socrates next suggests that the expert is the proper source of correct decisions. He points out that, in all technical areas, the skill of experts such as that of physicians and architects and military advisers is required, with the implication that, in deciding which choice is right or wrong, courts and assemblies should accept the advice of experts who have true knowledge. Gorgias is then allowed a long speech in which he develops the point that if the expert is not

convincing or persuasive, his advice will frequently not be accepted, so that the ability to persuade is essential to the social utilization of expert knowledge. Unlike Socrates, Gorgias bases his argument on the assumed existence of a democratic process, in which circumstance the services of the rhetorician will be not only tolerated but even welcomed as a necessary contribution to convincing the public of the validity of expert opinion. He cites the examples of Themistocles and Pericles persuading (not ordering) the Greeks to make proper naval preparations and to build fortifications to protect themselves against the Persians.[18] He further asserts that the misuse of the ability to persuade is not a reason for not teaching this art any more than is the misdirection of physical training (i.e., against one's friends) a reason for not teaching self-defense. Rhetoric, Gorgias argues, "should be used . . . like every other competitive art" (456c).

In a later discussion with Polus, another rhetorician, Socrates rejects the argument that the free play of persuasion in the marketplace of competitive ideas will lead to acceptable results because, he says, rhetoric permits one who is ignorant of right and wrong or the just and the unjust to *appear* to know more than the real expert "before a crowd [which] means among the ignorant" (459a).[19] He illustrates this point with a cook specializing in sweets vying with a physician for the support of his dietary recommendations before a crowd of children. The one who *knows* will never gain popular support, just as the truly wise competing with the rhetorician will lose out before the ignorant populace. It is suggested that cookery and rhetoric are measured by hedonistic standards in terms of bodily pleasure, whereas medicine and other kinds of "expert opinion" are measured by the soul or mind, apparently a higher form of hedonism.[20] The intelligent individual will therefore attempt to follow expert standards (465d–e).

The discussion next turns to the use of raw power as a controlling force in society. Polus maintains that those who have power over a city, either by rhetorical manipulation or by tyranny, enjoy the privilege of doing whatever they wish. Socrates, however, argues that "orators and tyrants have the very least power of any in our cities . . . for they do practically nothing that they will, but do only what seems best to them" (466d–e), being bound, like the rest of us, by the compulsions of rational self-interest. He maintains that even tyrants who ostensibly act as they please and commit unjust acts in actuality do not do as they will. According to Socrates, no one intentionally acts unjustly, because this would damage the inner harmony of his psyche. Since rational self-interest should govern in the well-ordered soul, if tyrants act unjustly it must be through ignorance of the best way to act in achieving their own moral self-interest and a violation of their actual will. Acting unjustly would be ineffi-

cient in terms of their own subjective, hedonistic purposes. Socrates contends that such error can only be rectified through individual instruction by someone with "knowledge." Public process, which results only in inadequate "belief" and not "knowledge," would be useless as a source of guidance for the tyrant.

Plato has here appropriated the very important sophistic argument referred to earlier that no one is voluntarily unjust to himself and put it into an ethical individualist context. It will be remembered that Xenophon drew on this principle to tie his illustration of justice in exchange to the subjective voluntarism of the boys with the tunics of different lengths. In that instance, Xenophon derived justice from the voluntary expressions of self-interest by the participants in a transaction. Plato, however, uses the principle to justify the exercise of power by an authoritarian ruler on the supposition that, since acting unjustly would not be in a ruler's moral self-interest, he would not do so voluntarily except through ignorance. He thus derives justice from the assertion of self-interest by an authority rather than from assertions of self-interest on the part of individual subjects or participants in the polity. He does not decry the exercise of raw power[21] but, instead, implies that the individual subject must be made to understand that submitting to the justice imposed by the ruler is in his own self-interest. He thus uses voluntary self-interest as a motivation for conforming to a rationally structured, just order. This is the reverse of defining justice as the consensus of voluntary expressions of self-interest by the participants in society.

Callicles, a practical politician, is later brought into the dialogue and in a long speech accuses Socrates of haranguing "like a true mob orator" (482c), of being tricky in debate, inducing strained admissions, and of leading his opponents into contradicting themselves. Callicles points out that there are two bases for defining justice: by convention and by nature. He argues that "those who framed the laws are the weaker folk, the majority. And accordingly they frame the laws for themselves and their own advantage . . . [and] frighten them (the strong) by saying that to overreach others is shameful and evil, and injustice consists in seeking the advantage over others. For they are satisfied, I suppose, if being inferior they enjoy equality of status." He goes on, "But in my view nature herself makes it plain that is right for the better to have the advantage over the worse, the more able over the less . . . that right is recognized to be the sovereignty and advantage of the stronger over the weaker." He bemoans the way the exceptional young are taken by conventional society, "catching them like young lion cubs, and by spells and incantation we make slaves of them, saying that they must be content with equality" (483b–c).[22]

This strong assertion of elite individualism and individual prerogative as a

basis for "natural justice" (natural law) is reinforced by Callicles, quoting lines from Pindar lauding Heracles for taking cattle without paying for them on the ground that he was the stronger (484b). Socrates does not take issue with the assertion that some type of superiority should be the basis for rule, but leads Callicles into admitting that "the many" are the stronger and that if physical power is accepted as a natural basis for a just order, under a theory of natural law the majority would rule.[23] By then including "the better" and "the wiser" with "the more powerful," Socrates succeeds in getting Callicles to agree with him that "one sensible man is often more powerful than ten thousand fools and it is right that he should rule and they be subjects and that the ruler should have more than his subjects" (490a).[24] This is a position consistent with the views attributed to Socrates in the *Republic*.

Socrates had earlier used the natural law argument to bring out two other points, that under the pressure of a democratic majority "it is more shameful to do than to suffer wrong and true justice to share equally" (489a). This is not contradictory to his thesis that power should be exercised by the expert (the stronger, the better, the wiser). The principle that it is more shameful to do wrong than to be wronged is the primary tenet of his contention that a moral hedonism restrains the superior individual concerned with following the dictates of his own intelligence. The second point, that true justice, under a democracy, is to share equally, is developed more fully in his discussion of need, where he asks whether someone who is "wiser" than the rest should "have a larger portion . . . because he is better, or in virtue of his authority should he do all the distributing, but in the use and expenditure of it ought he to seek no excessive portion for his own body, if he is not to suffer for it, but to receive more than some and less than others?" (490b–c). The implication here is that individuals should receive shares proportionate to their need, a form of geometric equality. The wise, however, will be concerned with limiting their need for material goods through temperance so as to avoid creating any imbalance in the harmony of their souls. The principle of the subjective limitation of needs by self-control is further developed in the parable of the jars, where those with leaky jars are "ever compelled to spend day and night in replenishing them." The superior individual does not succumb to the insatiability of material wants (his jars are not leaky), and he manages his given supplies "free from worry" (493e–494a). Plato thus rejects the characterization of the economic process as the impingement of unlimited wants on limited or scarce resources, a central tenet of neoclassical economic theory. Instead, reflecting the general ancient Greek view which lacked any emphasis on economic expansion or growth as a desirable objective in the political

economy, he extends the doctrine of personal equanimity to an endorsement of conforming one's demands to available supplies.

Having repudiated the efficacy of a public dialectic in the law courts and legislative assemblies to achieve anything but the flattery of the masses; and having, further, rejected the untutored exercise of power as inconsistent with a ruler's self-interest and a just society; and having, lastly, demonstrated that simple natural law only justifies majority rule over the few since the multitude is the stronger, Socrates then maneuvers the discussion once more toward the individual who is an expert in justice and primarily interested in ordering and administering his own inner makeup in proper proportion. Such an individual, it is inferred, will never impose injustice or bad proportion on others except through ignorance of what is best. He is guided by reason. Since he is subject to a moral hedonism and concerned with efficiency, he is always amenable to instruction. According to Socrates, these true lovers of justice even accept punishment for error as a pleasure.

In essence, Plato has adapted the heroic virtues of a shame culture to the society of his day by sanctifying them with an ethical hedonism. He has rejected the social process as a source of acceptable values and any possibility of its serving as a self-regulating mechanism for a just society. It remains for him to present an affirmative description of a just order (a political economy) that will function under the guidance of individual moral leadership. This is undertaken in the *Republic*, where he also continues the examination and rejection of theories of public process in favor of ethical individualism.

As Plato's major statement or definition of justice, the *Republic* describes the order appropriate to the economy and political structure of what he conceived to be the most rationally organized state, an efficient, static, changeless society administered by experts. As we have seen, one of the major premises underlying Plato's conception of the just order is that every individual has a single discernible natural capacity fitting him for a specific place—and no other—in the politico-economic structure of the state. As did Xenophon, Plato took the human element as the primary raw material of political economy and statecraft. Rationality therefore meant, for him, the optimally efficient combination and utilization of human capacities. Physical resources in the *Republic* are relegated to a minor, secondary role, so taken for granted as part of the static background as to be virtually invisible.

The Argument of Thrasymachus

Before describing his ideal political economy, Plato takes pains in the opening portion of the *Republic* to reject prevailing theories of social process advanced by Thrasymachus and, more abstractly, encompassed by the social compact thesis. Portrayed as a blustering, obnoxious exhibitionist, Thrasymachus presents his definition of justice or law: "I affirm that the just is nothing else than the advantage of the stronger" (338c). Pointing out that in different cities rule is by democracy, by tyranny, or by aristocracy, Thrasymachus continues, "And each form of government enacts the laws with a view to its own advantage, a democracy democratic laws and tyranny autocratic and the others likewise, and by so legislating they proclaim that the just for their subjects is that which is for their—the rulers'—advantage" (338e).[25] All Thrasymachus is saying is that whatever the form of government in power, it will make laws consistent with its ideals and objectives and that the citizens will be obliged to conform or be treated as violators of established order. This is to say little more than what Justice Oliver Wendell Holmes meant with his pragmatic definition of law for the practicing attorney as "the prophecies of what the courts will do in fact"[26] and is not inconsistent with Hans Kelsen's positivist theory of the legal order in which law is defined as a system of norms deduced from a basic norm.[27] It is essentially the same relativistic definition of justice as that advanced by Polus in the *Gorgias*.

Thrasymachus does not here make a distinction between "law" and "justice." Plato, on the other hand, develops a concept of an objective ethical standard for justice that can be used as a basis for criticizing any given system of laws inconsistent with "true knowledge" or his rationally derived objective standard. He first advances the suggestion that a ruler can make a mistake in the exercise of his power and cause a result that is disadvantageous to himself (339c), a contradiction of Thrasymachus's assertion that justice is nothing more than authority asserted for the advantage of the stronger. Socrates in this way introduces his objective effectiveness standard of justice by which given laws can be criticized. Others present at the discussion, however, come to Thrasymachus's aid by pointing out that if the interest of the ruler is *subjectively* defined, his own perception of his self-interest is the only measure of effectiveness.

To repudiate the principle of a subjective standard for decision making, Plato next advances the idea of effectiveness in achieving the purpose of an expert in the exercise of an art. Every art, he maintains, whether that of a ruler ruling his subjects or a doctor healing his patients, has one and only one

purpose,[28] the effective application of a body of skills to a subject, to be "as perfect as possible" in achieving the one end that is the sole measure of the expert's performance. He avoids any suggestion of a marginal utility criterion for appraising alternative choices. Instead, he clings tenaciously to an emphasis on a single natural purpose in terms of which the effectiveness of an art must be evaluated. He specifically rejects (342a–b) the idea of a separate art by which the effectiveness of another art can be appraised. As an example of the single purpose of an art, he uses the case of the physician applying his skill to the health of his patients, rather than applying it to make money or for other purposes (341d ff.). This is similar to his advocacy of a rigid division of labor for the efficient utilization of the unique capacities of individuals in a rationally ordered political economy. The optimum benefit to the ruled is to be efficiently integrated into specialized roles in the objectively ordered society; that of the ruler to achieve this objective most effectively. This is a general equilibrium concept of a perfected, static society in which the single specific role of each individual is deduced from the ideal system. The significant distinction to be drawn here is between the premises of a preexistent, rationally ordered total system, on the one hand, and the participative integration of independent, subjective interests which generate their own system, on the other. Socrates then uses his assertion of the singleness of purpose in the arts to argue that the "true ruler," in carrying out the one purpose of rule, directs his skill toward the benefit of the ruled, just as the physician does to the patient, and that the advantage of the inferior, not the advantage of the stronger, is the result of rule (342e).

This strained conclusion that the ruler devotes himself only to the interests of his subjects irritates Thrasymachus and he denounces Socrates for implying that shepherds are primarily concerned with "the good of the sheep" rather than "the good of their masters and themselves." Thrasymachus continues, "And by the same token you seem to suppose that the rulers in our cities, I mean the real rulers, differ at all in their thoughts of the governed from a man's attitude toward his sheep or that they think of anything else night and day than the sources of their own profit." Later he asserts that "the just man always comes out at a disadvantage in his relation with the unjust. To begin with, in their business dealings in any joint undertaking of the two you will never find that the just man has the advantage over the unjust at the dissolution of the partnership but that he always has the worst of it" (343b–d). Thrasymachus is presented by Plato as supporting a pure form of hedonic self-interest similar to that portrayed by Mandeville's *Fable of the Bees* which laid the foundation of the modern theory of laissez faire. However, Thrasymachus

accepts such conduct as "unjust" in terms of the "just" pattern of behavior, defined by Socrates as the duty of fulfilling one's single function in the ideal order.

The dedicated shepherd argument is further developed by Socrates to the effect that in the true practice of administration, whether public or private, the interests of the subject of administration or rule is the object of rule. He asserts that the art of the "true shepherd" is "concerned with nothing else than how to provide what is best for that over which it is set, since its own affairs, its own best estate, are surely sufficiently provided for so long as it in nowise fails of being the shepherd's art" (345d). It is thus in performing the single function of the art, and not as an anticipator of a feast of mutton nor as a money maker, that the shepherd is a "true shepherd." Under increasing burden to explain the motivation of such single-minded devotion of the ruler to the interests of the ruled, Socrates explains to Thrasymachus that "no art or office provides what is beneficial for itself"; it provides "only what is beneficial to its subject, considering the advantage of . . . the weaker, and not the advantage of the stronger." This is why, it seems, rulers must be paid "either in the form of money or honor" to induce them to perform their duty (346e–347a). Socrates later abandons this materialistic justification of rule as he develops ethical hedonism as the equilibrating incentive in the static political economy of the *Republic*.

In the *Gorgias*, Callicles had contended that the superior individual has a natural right to rule and to satisfy without limit or hindrance his own self-interest. Socrates there pointed out that the assertion of natural power would ultimately result in democratic control and also argued that the services of the outstanding leader deserve a larger share as compensation for guiding the community. Here, in contrast, Thrasymachus abandons any argument for a naturalistic or moral justification of the right to rule in favor of a simple positivist description of the realities of power. He thus gives us a pure statement of avaricious individual self-interest as the basis for political participation. He carries this argument to the conclusion that the unjust individual, that is, the person committed to his own unrestricted self-interest, will benefit most in society.

Thrasymachus's argument provides a reference base for Socrates to assert that there is a kind of technocratic compulsion for the expert or superior individual to apply his art effectively, a concept similar to Veblen's "instinct of workmanship." The motivation of the outstanding individual in a position of authority, like that of Veblen's technocrat, is to practice his art efficiently. The interests of those who are ruled are optimized, as are the sheep under the

guidance of a shepherd who is impelled by his art to perform it as efficiently as possible.

The long and the short of the situation is that explanations of political and economic order based on social process are set aside, and the inquiry continues in search of explanations of the politico-economic results of individual actions couched in terms of whether "justice" or "injustice" is most beneficial to the individual. As a parting summation of this discussion, Plato suggests that injustice makes any group "incapable of effective action in common" (351d–e). By implication, effectiveness in achieving order is empirical evidence of the justness of the order.

The Social Compact

At the beginning of Book II, Glaucon, one of Plato's older brothers, insists that the examination of the relativistic theory of justice not be abandoned, for, he says, the well-known arguments in its favor have not been adequately developed. Thrasymachus, it seems, has given up the argument too easily. Glaucon therefore volunteers to restate the relativist position so that those assembled can hear Socrates' refutation of it.[29]

The popular argument, Glaucon says, is that men behave justly only because of necessity, and that they do so unwillingly because it would be to their individual advantage to behave unjustly (358c).[30] He presents the social compact doctrine[31] as follows: "By nature, they say, to commit injustice is good and to suffer it is an evil, but that the excess of evil in being wronged is greater than the excess of good in doing wrong, so that when men do wrong and are wronged by one another and taste of both, those who lack the power to avoid the one and take the other determine that it is for their profit to make a compact with one another neither to commit nor to suffer injustice, and that this is the beginning of legislation and of covenants between men, and that they name the commandment of law the lawful and the just." This situation is defined by Glaucon as "a compromise between the best, which is the power to do wrong with impunity, and the worst, which is to be wronged and be impotent to get one's revenge." "Justice," he says, "[is] . . . midway between the two" (358e–359a).[32]

In economic terms, Glaucon's statement might be rendered as follows: To encroach upon others is a *benefit*, while to be encroached upon is a *loss* or *cost*. Since the cost or damage from being indiscriminately encroached upon by others is greater than the potential benefits from indiscriminately encroaching upon others, at least as far as the weaker majority is concerned,

there is a cost-benefit advantage in organizing a system of restraints, an equilibrium between the self-interest in freedom of action and the self-interest in protection of person and property.[33] Glaucon even uses economic terms later in the discussion in describing the unprofitability of being just without also appearing so: "The consequences," he asserts, are "not assets . . . but liabilities, labor, and total loss" (365b).

Glaucon's second point is that "those who practice [justice] do so unwillingly and from want of power to commit injustice" (359b). This is consistent with the assumption that rational self-interest is the prime motivation of human action; it is the opposite of Socrates' contention that no one does wrong willingly and that it is worse to do than to *suffer* wrong. These positions reveal the conflict between a materialist interpretation of a politico-economic world, where individuals are motivated by rational self-interest, and Socrates' world where individuals are motivated by ethical self-interest. Socrates' philosophy admits of only one internally consistent fabric of rational coherence underlying a static system of ultimate truths from which appropriate behavior can be deduced by conscientious experts. He tends to substitute a moral empathy between the individual and this ideal system for Protagoras's reliance on empathy between the individual and society at large. The view presented by Glaucon, on the other hand, is one in which proper order (law) is derived from adjustments between self-interested individuals who persist in believing that they can benefit from deviating from the laws if they can escape detection.

The problem for Glaucon's position is how society can successfully function in view of these destructive forces. Moreover, there is the difficulty of how enough trust[34] could ever be generated between self-interested and opposing interests to achieve an agreement not to "commit injustice." A kind of "invisible hand" concept, although unstated by Glaucon here, may have served to obscure the problem by minimizing the potential impasse between individual interests and the public interest. The concept is clearly suggested in Aristophanes' *Ecclesiazusae* (473):

> There is a legend of the olden times
> That all our foolish plans and vain conceits
> Are overruled to work the public good.

This anticipation of Adam Smith's "invisible hand" and Mandeville's thesis in his *Fable of the Bees* that private vices result in public virtue, as noted by F. A. von Hayek, is an example of the view common to many cultures that "a special providence" turns the "unsystematic efforts" of individuals to the public benefit.[35]

Another contemporary view passed over in the *Republic* is that of Protagoras, to be discussed in Chapter VI, that it is mankind's endowment with *aidos* or fellow feeling, the concern for the interests of others, that holds society together. This principle, called "human sympathy" by Adam Smith, underlay his rejection of a rationalistic social compact thesis in his *Theory of Moral Sentiments*. "It is altogether absurd and unintelligible to suppose," he wrote, "that the first perceptions of right and wrong can be derived from reason, even in those particular cases, upon the experience of which the general rules are formed. These first perceptions, as well as all other experiments upon which any general rules are founded, cannot be the object of reason, but of immediate sense and feeling."[36]

Solon's administrative approach to the problem of social cohesion, framed in terms of contract theory, attempted to eliminate the friction between natural self-interest and the public interest with the laws designed to elicit perceptions of mutual advantage. His explanation was that "men keep their agreements with each other when neither party profits by the breaking of them," and he added that he "was adapting his laws to the citizens in such a manner as to make it clear to all that the practice of justice was more advantageous than the transgression of the laws."[37] One of Solon's reforms permitted any citizen to go to court to defend the legal rights of an injured fellow. Cyrus's handling of the Armenian-Chaldean adjustment, discussed in Chapter III, was also an attempt to structure trust administratively between contending parties. Such positive administrative formulations of social process circumvent the problem of lack of trust in the initiation of rational human interaction.

The Ring of Invisibility

Glaucon next proposes the acid test of pure hedonism, whether humans are by nature inclined to follow self-interest completely without restraint at the expense of others except when prevented from doing so. The question is, if others will never know who has damaged their interests, is there any incentive for an individual to restrain himself from satisfying his own desires at the expense of others? The test is illustrated by the story of the ancestor of Gyges, ruler of Lydia, who accidently came by a ring which could make him invisible when the face of the ring was turned inward. He rapidly rose from a poor shepherd to king, being completely unrestrained by social convention or any other authority because of the power he could exercise as a result of his invisibility (359d–360a).

Glaucon speculates that if there were two such rings, one worn by an un-

just man and the other by a just one, neither would "refrain his hands from the possessions of others and not touch them . . . he might with impunity take whatever he wishes even from the market place, and enter into houses and lie with whom he pleased, and slay and loose from bonds whomsoever he would, and in all other things conduct himself among mankind as the equal of a god." As between the unjust and the just man, "both would pursue the same course" (360b–c), presumbably by "ediet" of nature. In other words, appearance is all that matters: with the ability to conceal violations of the rights of others, every man would have a Gyges ring.[38] We recognize in this formulation Lord Acton's discounting of morality as a restraint to behavior in his famous adage that "power tends to corrupt and absolute power corrupts absolutely."

Glaucon's account of the "ring of invisibility" clearly sums up the issue. If maximum advantage can be derived from secretly flouting public law while *seeming* to follow social justice, then natural order, i.e., natural justice, pays better than social justice and is what men will follow if they maximize their material or hedonistic self-interest. The vital question is thus posed as to whether there is any mechanism in society that will assure that it will pay the individual to follow the laws of society, i.e., will justice pay?

For the most extreme form of hedonism, Glaucon next poses the hypothetical cases of the optimally efficient unjust man and the purely just man. To the "perfectly unjust man," he says, "we must assign perfect injustice and withhold nothing of it, but we must allow him, while committing the greatest wrongs, to have secured for himself the greatest reputation for justice." He is further given rhetorical and physical powers to aid him in covering up his nefarious deeds, as well as "friends and money" (361a–b).[39] To the perfectly unjust man, Glaucon counterposes the perfectly just man, "a simple and noble man who . . . does not wish to *seem* but to *be* good." Then, says Glaucon, "we must deprive him of the seeming . . . so we strip him bare of everything but justice." Therefore the just man is given the greatest reputation for injustice (361b–d).

This illustration of the disparity in material rewards between the unjust and the just man, however, is not fully explored. Instead, this comparison, originally set up for the purpose of analyzing the profit motive outside the constraints of social convention, ends with Glaucon raising the question of "which of the two is the happier" (361d). This subtle shift from the material to the more intangible aspects of the rewards of injustice equivocates the basis upon which conduct is to be evaluated, apparently in anticipation of Socrates' ultimate ethical position. But Glaucon repeatedly returns to the more materialistic benefits of injustice, reminding us of the embedded economic content

of the discussions about just order. Listing the rewards for the unjust man who gains a reputation for justice, Glaucon enumerates "first office and rule in the state because of his reputation for justice, then a wife from any family he chooses, and the giving of his children in marriage to whomsoever he pleases, dealings and partnerships with whom he will, and in all these transactions advantage and profit for himself because he has no squeamishness about committing injustice" (362a–b).

An interesting aspect of this discussion is the systematic avoidance of any reference to an equilibrating social process that might regulate excesses of behavior. However, the allusion to two rings of invisibility (360b) suggests that there may have been a sophist treatment of the possibility of two persons with unrestricted powers providing a regulatory check on one another. There is also the reference at the end of the discussion of whether justice pays to "guarding against one another's injustice" (367a), but the possibility of a competitive equilibrium that would provide either a political or an economic regulatory process is never developed. This is particularly significant because such ideas were obviously familiar to Plato, as evidenced by Protagoras's views in the *Theaetetus*.[40]

Taken as an allegory on the problem of social control and its dependence on public information, the Gyges story places in sharp relief the question that must be answered by any theory of social order: how are contending elements to be governed or regulated? In the *Wealth of Nations*, Adam Smith answered the question by positing material hedonism as the regulatory mechanism which would both control individual excess and promote the public good. His statement of material hedonism is one of the most famous in literature. "It is not from the benevolence of the butcher, the brewer, or the baker," he wrote, "that we expect our dinner, but from their regard to their own interests. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantage."[41] He turned this propensity for individual self-interest in upon itself to create an equilibrium of avaricious competitors, and his assertion of the role of self-interest in the equilibration of competing interests in a self-regulating market has been equally influential on later thought. The individual, he wrote, though he "neither intends to promote the public interest, nor knows how much he is promoting it," though "he intends only his own gain," is "led by an invisible hand to promote an end which was no part of his intenion. . . . By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it."[42]

Does Justice Pay?

After Glaucon's discussion of the question of whether the material benefits of being unjust are preferable to those of being just, Adimantus offers to supplement the presentation. His point is that the whole issue of justice revolves around the question of *seeming* just. "Fathers . . . and all those who have others in their charge," he says, "urge the necessity of being just, not by praising justice itself, but the good repute with mankind that accrues from it, the object that they hold before us being that by seeming to be just the man may get from the reputation office and alliances and all the good things that Glaucon just now enumerated as coming to the unjust man from his good name" (362e–363a). He adds, "They say that injustice pays better than justice" (364a).[43]

Adimantus's introduction of this issue—"the very most essential point," he says—suggests that there was a school of thought in which the social fabric of belief or public opinion was presumed to govern social process and that it was this social reality to which the individual was expected to accommodate himself.[44] The issue of *seeming* just, however, is not further developed here. Instead, the discussion turns to whether there is any source of restraint to prevent individuals from benefiting from injustice. The restraint of punishment by the gods is discounted on either of two grounds: that the gods do not exist or that, if they do, they can be propitiated by gifts and sacrifices.[45]

In this speech Adimantus abandons any further attempt to explain the nature of social processes and institutions that could maintain a workable social order (justice). He acquiesces instead to the cynical presumption that all such processes can be perverted or subverted: "For with a view to lying hid we will organize societies and political clubs, and there are teachers of cajolery who impart the arts of the popular assembly and the courtroom, so that, partly by persuasion, partly by force, we shall continue to overreach with impunity" (365d). This contention is a parallel of an argument of Antiphon the Sophist[46] to the effect that legal restraints on unjust conduct are ineffective because the remedy is in the courtroom, where the weaker, infringed-upon party is still subject to the superior rhetorical resources at the command of the more powerful wrongdoer.[47] In the same vein, Anacharsis the Scythian laughed at Solon's attempt to control injustice and rapacity with his written laws. The laws, Anacharsis said, would be "just like spiders' webs; they would hold the weak and delicate who might be caught in their meshes, but would be torn in pieces by the rich and powerful."[48]

With his rejection of social constraint as an effective method for maintaining justice, Adimantus ends his speech by anticipating the Socratic answer to

the dilemma. He observes that none of the advocates of justice have ever "censured injustice or commended justice" on any basis other than "the repute, the honors, and the gifts that accrue from each." That is to say, the only defense of justice has been in terms of the social advantages to be derived from *appearing* to be just and not from actually being just because of some benefit inherent in the practice of justice itself. No one, he says, has ever "set forth in poetry or prose—the proof that the one [injustice] is the greatest of all evils that the soul contains within itself, while justice is the greatest good. For if you had spoken in this way from the beginning and from our youth up had sought to convince us . . . each would be his own best guardian" (366e–367a).[49] The only valid motive for practicing justice and maintaining social order must thus be individual and internal, one that men would follow even if it resulted in personal inconvenience or discomfort. In Adimantus's view, just conduct results from a conscious desire to do what is "right" and can be validated only on its own terms.[50] Just actions will make the just man happy through a sense of inner satisfaction with his own actions. With the introduction of a moral dimension, the possible bases for just conduct at this point include: (1) the material hedonism advanced by Thrasymachus and (2) the ethical hedonism advanced by Adimantus. The ground is now prepared for a moral and individualistic definition of objectively proper conduct to replace the relativistic social definition advanced as the "popular" view.

Justice in the Macrocosm: Blueprint for an Economy

To determine the nature of order and justice in the microcosm of the inner self, Plato first analyzes the macrocosm of the city, on the theory that the principles characteristic of the smaller are replicated in the larger system and can be more easily seen there. Once clarified, he suggests, we may look "for the likeness of the greater in the form of the less" (369a). As we follow Socrates' presentation, it will be apparent that he is describing an economy as much as a polity, since, in his view, all relationships reflect certain propensities which lead to similar patterns of conduct.

"The origin of the city," he writes, "is to be found in the fact that we do not severally suffice for our own needs, but each of us lacks many things. . . . As a result of this . . . one man calling in another for one service and another for another, we, being in need of many things, gather many into one place of abode as associates and helpers, and to this dwelling together we give the name city or state. . . . And between one man and another there is an interchange of giving and taking, because each supposes this to be better for himself. . . . Come, then, let us create a city from the beginning, in our theory.

Its real creator, as it appears, will be our needs" (369b–c). This passage is about as clear a statement of the economic genesis of a state based upon subjective mutuality as one could expect to find. Moreover, the economic need of the individual is given priority. The discussion contains elements of the theories of social evolution and the social compact, earlier rejected as explanations for human actions in favor of happiness and internal harmony. The exposition sounds a bit more Protagorean than Socratic.

Socrates lists human needs in order of their importance, beginning with food, shelter, and clothing (needs of the body). To provide for these needs, the city will contain a minimum of four or five men: a farmer, a builder, a weaver, a cobbler, and "some other purveyors for the needs of the body" (369d). The division of labor is raised with the question, "shall the farmer, who is one, provide food for four and spend four-fold time and toil on the production of food and share it with the others, or shall he take no thought for them and provide a fourth portion of the food for himself alone in a quarter of the time and employ the other three quarters, the one in the provision of a house, the other of a garment, the other of shoes, and not have the bother of associating with other people, but, himself for himself, mind his own affairs?" (369e–370a). This formulation has the elements of a simple matrix and could be presented in a Leontief-style input-output table illustrating an interdependent economy. A similar formulation and classification of needs is found in Book I of Aristotle's *Politics*.

Turning from specialization as a basis for mutual interdependence, Socrates next takes up its function as a source of efficiency and productivity. Since "our several natures are not all alike but different," one individual "is naturally fitted for one task, and another for another. . . . The result is, then, that more things are produced, and better and more easily when one man performs one task according to his nature, at the right moment, and at leisure from other occupations" (370b–c). One should not ignore the mention here of quantitative efficiency ("more things are produced") resulting from specialization. Although much emphasis has been placed on discussions of quality, particularly by Xenophon, as indicated earlier, he also treated quantitative efficiency. Socrates here attributes both qualitative and quantitative efficiency to the division of labor (and timing) based on natural endowments.

What is of more interest, however, is that the potentiality for specialization in the basic economic community based upon reciprocal exchange of products between four artisans (farmer, builder, weaver, and cobbler) is extended further when Socrates suggests that the basic economic community will have to be larger: "For the farmer, it appears, will not make his own plow if it is to be a good one, nor his hoe, nor his other agricultural implements" (370c–d).

The extension of specialization to tool making, i.e., capital equipment, includes the other crafts. Plato's recognition of the consequences of the division of labor may be presumed to reflect a conventional outlook on specialization in economic activity since it is also repeated in Book I of Aristotle's *Politics*. Although Socrates here seems to be only restating a body of conventionally accepted analysis, it appears that he is framing the social compact thesis in his own terms in order to repudiate it.

The interdependence of the economic community is next extended to include the production of the requisite components of the chain of production, such as oxen for transport and wool and hides for weaver and cobbler (370e). Further, the problem of self-sufficiency and the need for goods from other regions is considered since the "home production must not merely suffice for themselves, but in *quality* and *quantity* meet the needs of those of whom they have need" (371a; italics mine). This restates the idea of subjective mutuality in foreign trade.

After the necessity for importers, exporters, administrators, and traders is itemized, the question of distribution is introduced: "But again, within the city itself, how will they share with one another the products of their labor? This was the very purpose of our association and establishment of a state." The answer is a "market place . . . and money as a token for the purpose of exchange" (371b).

The fact that the discussion of distributive shares is followed by a reference to an internal market may appear to indicate that Plato thought of the market as a regulatory system for the economy at large. In the *Laws* (737e–738a), however, where this sequence of issues is replicated in greater detail, we find that the number of households in the city is to be fixed at 5,040 because this total is subject to division into an optimum number of administrative units (59), as well as being divisible into whole number quotients by the first ten numbers. Moreover, citizens are to be assigned "fitting portions" of the capital assets of the community which are to remain unchanged; trade therefore can only distribute consumer goods. Control is to be maintained by use of an internal token or fiat money; profit and usury are to be eliminated, and shares held constant following mathematical principles.

In the *Republic*, money as an intermediary in exchange is recognized as saving producers the burden of trying to line up matching barter arrangements: "If . . . any . . . craftsman taking his products to the market place does not arrive at the same time as those who desire to exchange with him," Socrates asks, "is he to sit idle in the market place and lose time from his own work?" The question is answered, "By no means . . . there are men who see this need and appoint themselves for this service—in well-conducted cities

they are generally those who are weakest in body[51] and those who are useless for any other task" (371c–d). Thus, barter will not be necessary with the use of fiat money and an intermediate stage of exchange. Plato's rationalistic explanation of the structure of the economic process takes on an evolutionary flavor with this introduction of a merchant middleman between potential candidates for barter. Moreover, a further distinction is made between retail traders in the market and merchants who travel from city to city.

There are in Plato's city, in addition, others "who in the things of the mind are not altogether worthy of our fellowship, but whose strength of body is sufficient for toil; so they, selling the use of their strength and calling the price wages, are designated . . . 'wage earners'" (371e). One is reminded of Callicles' disdain in the *Gorgias* (489c) for "the rabble of slaves and nondescripts who are of no earthly use except for their bodily strength." This emphasis upon mindless strength requiring supervision for its own as well as the social good is the rationalization of slavery articulated more clearly in Aristotle's *Politics* (1253b). There is no specific designation of a category of slaves in the *Republic*, but, within the context of legally assigned tasks from childhood in an administrative state, the concept of traditional slavery associated with individual ownership has no place.

Our main interest in this outline of the basic nature of a simple economy is in how it fits into Plato's concept of justice, both in its macrocosmic form in the state and in its microcosmic form in the individual. Socrates specifically raises this issue: "Wherein, then, can justice be found in it? And along with which of the constituents that we have considered do they [the elements of justice] come into the state?" (371e).

Adimantus answers, "I cannot conceive . . . unless it be in some need those very constituents have of one another" (371e–372a), an allusion to the affirmative social compact thesis. With the acceptance of Adimantus's suggestion, Socrates agrees that the essence of justice in the macrocosm of the state is to be found in the system of economic interdependence which grows out of the production and distribution of goods. He had previously rejected a social compact thesis which found justice in the convention of individuals standing on essentially equal footing voluntarily and self-interestedly bargaining for benefits. Instead, his system is structured from above by an authoritarian administrator who assigns roles to individuals on the basis of their natural differences in skills and capacity, to integrate them into the economy. Justice, then, in his view, is the system by which this integration is achieved and maintained in changeless form, an entirely different arrangement from a social compact based on consensus and rational negotiation. The difference is between a theory of economy and government based on rational consensus, on the one

hand, and one based on an ideally rational and efficient system instituted by a superior intellect or lawgiver, on the other. In the former, validation is based on the free interaction of individuals on similar footings negotiating for their own advantage. In the latter, legitimacy is tied to an administrative success ethic based on the claim of an authoritarian ruler to be able, because of his superior acumen, to promote the highest level of efficient mutuality. The first envisions a *social* process achieving any objective agreed upon *by the participants*, while the second envisions an *intellectual* process by only *one individual* as the vehicle for the achievement of an ideal arrangement or objective which is to be determined and judged solely by the rationality of that same individual, the authoritarian administrator. In the first, any of a number of possible outcomes arrived at through the interplay of individual value judgments may be equally valid, while in the second only the outcome that is efficient in achieving the objectives of the administrator has any validity.

The dialogue leaves hanging the issue of the precise definition of justice and digresses into a description of a political economy that provides only goods of the body, which Glaucon characterizes as "a city of pigs" (372d). The admonition against the citizens "begetting offspring beyond their means lest they fall into poverty or war" (372c) is a reflection of the ancient consciousness of the danger of overpopulation.

The discussion continues the exploration of the elements that must be added, consistent with the premise of optimum effectiveness associated with specialization in single tasks, if a city is to support a moderate level of pleasant living and to maintain a standing army. From this point on, the dialogue is involved in an elaborate exposition of the selection and training of the military guardians of an ideal state. The emphasis on natural capacities, however, is not to be confused with a notion of evolutionary process through which individuals will gravitate to their best potential place in the political economy from the impetus of their natures. Socrates here explicitly reveals his fundamental departure from the social compact thesis. He emphasizes the importance of having one man perform one job in the crafts or in the military. One task is to be "assigned to each and every . . . man . . . for which he [is] fit and naturally adapted and at which he [will] work all his days" (374b–c). It becomes increasingly clear that it is an administrative justice aimed at a relentless maintenance of the status quo that is to govern the political and economic system of Socrates' ideal city.

Socrates disparages developments in medicine—"the coddling medication of diseases" attributed to Herodicus (406a)—that permit the dragging out of life in unproductive impotence, but lauds the commitment of the craftsman who is so dedicated to duty that he prefers to refuse medical treatment that

prolongs his life beyond his capacity to fulfill his designated role. A "life of preoccupation with his illness and neglect of the work that lies before him isn't worth living" (406d). He refers approvingly to Asclepius who, he recounts, offered no assistance to those whose "bodies were diseased inwardly and throughout," for "if a man was incapable of living in the established round and order of life, he did not think it worth while to treat him, since such a fellow is of no use either to himself or to the state" (407d). This is the ultimate in the enshrinement of duty in the administrative tradition. Socrates' comments on the proper objectives of the skilled medical practitioner and the appropriate commitment of the loyal citizen in an ideal society are revealing and clarifying. They give us a fuller picture of the limits of Plato's hedonism and insight into the source of his measure of efficient social organization.

It is plain that, for Plato, the proper source of an individual's happiness and therefore his hedonistic optimum is to be found in the efficient or virtuous performance of his administratively assigned role in the state, and that those who fail in this respect are expendable. This requires an orderly psyche with personal attunement with the highest level of rational order, that is, the order decreed by the most rational and intelligent leader in the community. According to this ethical individualism, each citizen achieves the greatest happiness by performing his most efficient role in society; society, on the other hand, achieves its optimum development or most nearly approaches the ideal type when each individual accepts the definition of his or her proper role as prescribed by those who *know*, i.e., those with the highest order of insight and powers of reason.[52] We have here an update of the patriarchal tradition, the God-king lawgiver whose ultimate authority is now sanctified by a rationalistic justification that the best and most efficient social organization is a static type discernible by the most outstanding intelligence in the community. Everyone else should be happy to act in accordance with the enlightened guidance of the "best," since this course of action will allow them to share in the greater total benefits that result. This is a vertically structured hierarchy of *duty*, in which there is no definition of individual *rights*, but only a duty to serve by the many and a duty to govern by the philosopher-king, ultimately owed to some higher authority.[53]

In developing the criteria for justice in the city, the hedonistic standard of personal happiness referred to from time to time is qualified to fit Plato's concept of the ideal state. The *general* welfare, as defined by the administrator, and not the happiness of any individual or group is the standard by which the effectiveness of any measure is to be judged: "The object on which we fixed our eyes in the establishment of our state was not the exceptional happiness of

any one class but the greatest possible happiness of the city as a whole" (420b). Extremes of prosperity and poverty, it is noted, will impair this objective, the former destroying incentive, the latter impairing the provision of adequate tools (undercapitalization) (421d).

Justice in the Microcosm: The Ethical Economy of the Individual

Having now viewed "some larger thing that contained justice" (the city), Plato next proposes to "discover its nature in the individual man" (434e) by examining the common elements of "virtue" (wisdom, courage, sobriety or temperance, and justice) as they are expressed in the city, as well as in the individual who should guide the political economy. We are reminded of the philosophical underpinnings of Platonic philosophy when Socrates points out that the totality of these desirable attributes is virtue and that, if the first three are defined and subtracted from the totality, justice will be defined by deduction, being the remainder (427e–428a; 432b).[54]

The capacities of the philosopher who deserves to be the leader or ruler of the ideal political economy are stated negatively by describing as unfit for rule "those who have no vivid pattern in their souls (minds) and so cannot, as painters look to their models, fix their eyes on the absolute truth, and always with reference to that ideal and in the exactest possible contemplation of it establish in this world also the laws of the beautiful, the just, and the good . . . [and] guard and preserve those that are established" (484c–d). This concept of an ideal theoretical blueprint for an efficient and morally harmonious society fixed as a pattern in the mind of the potential leader is entirely consistent with the broader philosophical outlook of Plato's theory of the Ideas. The politico-economic implementation of this notion of static truth toward which reason and insight should lead the community is symbolized in the superior intellectual leader representing the rational element which is "ever enamored of the kind of knowledge which reveals . . . something of that essence which is eternal, and is not wandering between the two poles of generation and decay" (485a–b).

Equipped as we are with this clear statement of the objective of conforming to ideal values or ultimates in relationships and the rejection of Heraclitean theories of flux and relativistic theories of process, it is easier to understand Plato's long-delayed definition of justice as politico-economic order optimizing administratively integrated natural capacities. Justice, it is maintained, is the principle "conducting to the virtue of a state," "the principle embodied in

child, woman, slave, free, artisan, ruler, and ruled, that each perform[s] his one task as one man and . . . not [as] a versatile busybody," the "principle of everyone . . . doing his own task" (433c–e).

This apparent emphasis on "doing one's own thing" may be misleading, given modern presumptions of natural rights and social mobility. Justice as the "having and doing of one's own and what belongs to one's self" (434a), although possibly subject to a dual interpretation even in Plato's day, does not here carry the connotation of independence in pursuing one's own interests, for, as pointed out above, these strictures clearly refer to rigidly defined class roles assigned to (not chosen by) each individual. Injustice, on the other hand, is specifically defined as "the interference with one another's business" (434b) by the three classes of the city (the money-makers, the helpers, and the guardians), the "thing that works the greatest harm to one's own state" (434c). From an affirmative statement of the concept of a rationally structured political economy based on assigned roles derived from administrative determination of each individual's nature, Socrates then proceeds to argue that the principles of internal order and the hierarchy of forces that make the city just and orderly are the same hierarchy writ large that dominates the individual psyche, so that "this form, when applied to the individual man, is . . . a definition of justice" (434d).

The Rational Element: Control of the Individual and the State

The thesis that there is an ideal form or blueprint for justice common to the individual and to the state, that the just man "will not differ at all from a just city in respect of the very form of justice, but will be like it" (435b), that the individual microcosm will be a replication of the social macrocosm, is a tremendous leap of faith in political and economic theory, made with little rational or empirical support.[55] It is indicative of the fact that Plato's thought is completely lacking in any theory of a participative political or economic process for arriving at the just or orderly state. Reliance, instead, is placed solely on the rational factor: for the state, the leadership of the philosopher-king, and for the individual, reason dominating the baser elements of the psyche. This is why Plato could not imagine or explain any sequence of events that could put the ideal state or economy into effect (other than through the fortuitous birth and proper training of a philosophically inclined heir to a throne); he could only envision its being *imposed* by authority.

Plato's discourse on the ideal political economy reflects a single-minded reliance on rationalism, honed by rigorous education and training for the se-

lected and enlightened candidates for rule. Traditionally there had been a very strong emphasis upon training, heavily oriented toward military skills and athletic prowess, on the part of the Hellenic upper classes. The reinforcement of this aristocratic tradition, focusing upon natural potential and training to rule supported by self-discipline and rational ordering of personal values, has given Plato's orientation an enduring place in European social thought since it has been as ideologically congenial to the European aristocratic tradition as it was to the Hellenic. Plato's popularity among the practical as well as the philosophically inclined representatives of the European nobility and landed gentry was insured with his rationalization of the redemptive burden of noblesse oblige, which gave an ethical sanctification to inherited status and self-appointment.

The notion that every individual might play a double role in the community, as both economic and political participant (Protagoras's idea), is rejected for Plato's ideal city since he considered political expertise to be a specialty that could be competently mastered by only a few. The disorder that results if strict division of labor is not followed is illustrated with the parable of the ship where the failure of each seaman to perform only his assigned task and the presumptuousness of the crew in assuming the capacity to pilot the vessel results in hopeless chaos; they reject as a mere stargazer the only man capable of piloting it. The resulting condition on the ship "is the exact counterpart of the relation of the state to the true philosophers" (489a). Just as the sick must "go to the door of the physician," so those who need governing must go to the natural ruler (489c). However, the expectation that those "who need to be governed" should be able to identify and call on the philosopher to rule is difficult to reconcile with the assumption that "the multitude" is incapable of intelligent judgment.

The ship in the parable corresponds to the state of nature in the social compact thesis and, under the assumptions of that theory, the rational capacities of the seamen would lead them to adjust their relationships to obtain optimum benefit. This outcome would be consistent with the premises of naturalistic theories of both democracy and of the laissez-faire market. Instead of this outcome, however, Plato can only conceive of chaos, unless the rational element in the seamen should lead them to perceive their duty and proper role on the ship or their hedonic self-interest should lead them to seek the optimum benefit from proper supervision in an ordered state (the ship).

In the *Republic*, Socrates makes a tripartite correlation between the elements of the state and those of the individual, with the philosopher-king corresponding to rational capacities in the mind, the military corresponding to personal spirit and courage, and the base pursuits corresponding to the physical appetites of the body (435c ff.). These three elements in the state correspond to

needs in the individual. It follows, then, that in the proper self-discipline of the individual, the rational element should govern, and the only way for this element to assert itself is on its own terms, not by being invoked by the lower appetites.

In the *Laws*, the tripartite concern of the disciplined individual is seen as parallel to the proper management of the state where "interest in possessions, rightly pursued, holds the third and lowest rank, the interest of the body is second, of the soul first" (743e). The element of soul or the rational principle in the universe is later characterized as capable of "self motion" (896b) and is therefore the dominating and initiating element. This principle, extended to the personality of the individual, underlies the notion that the mind or rational element takes priority and dominates the individual's bodily and material desires so that pure reason or soul, as a self-motivating capacity, has the potential for providing the leadership of the state. Plato points out in the *Republic* (492 ff.), however, that the most promising individuals are unfortunately subject to corruption in a democratic state.[56] They must therefore be educated and trained in philosophy to assume the role of philosophical leader so that they will resist the subversion of the processes of democratic rule. Socrates' only concession to social process is to offer dialectic as an educational device for dealing on a one-to-one basis with individuals he seeks to educate, and this is the only procedure he suggests for achieving the desired political and economic structure in the state and the desired order and harmony (justice) in the individual. It can hardly be classified as a social process, but is rather an individualistic approach to education.

This perspective on the parallelism between the microcosm of the individual and the macrocosm of the state leads back to the premise that the only process by which the state can be put in just order is by the self-assertion of the rational leader. Furthermore, Plato was aware that there would be difficulty in maintaining the status quo in his ideal, just state, for he has Socrates observe that "there would always have to be resident in such a state an element having the same conception of its constitution that . . . the lawgiver had in framing its laws" (497c–d). There is a suggestion that this role might be played by the older mature minds who are committed to philosophy (498c).

Some hope is expressed in the *Republic* that chaos will be avoided, and the multitude is not entirely condemned. If the common man's mind can be "truly fixed on eternal realities" and his gaze "upon the things of the eternal and unchanging order," he may try to imitate the philosophers and "fashion himself in their likeness and assimilate himself to them" (500c). By "associating with divine order," the individual may "become orderly and divine in the measure permitted to man" (500d). The multitude, it is hoped, will come to

trust philosophers and recognize that "no city could ever be blessed unless its lineaments were traced by artists who used the heavenly model" (500e). These political philosopher-artists "will take the city and the characters of men, as they might a tablet, and first wipe it clean—no easy task." Unlike ordinary reformers, "they would refuse to take in hand either individual or state or to legislate before they either received a clean slate or themselves made it clean" (501a). The "rubbing out" process whereby the unacceptable are eliminated is not made clear.[57]

This tabula rasa thesis is an administrative perspective, not a theory of natural process in the Lockean tradition. Plato's hope for the emergence of the authority to impose his conception of justice and order is in the "chance that the offspring of kings and rulers should be born with the philosophical nature" (502a). This vision of the sequence of events by which political and economic justice was to be achieved lends color to Plato's long and frustrating liaison with the ruler of Syracuse and his disappointment as tutor to the heir apparent. Plato was forced into the role of waiting at the doorstep of the heir to the tyranny but finally gave up, unable to gain political support for his policies among the power brokers of the centralized Syracusan administration.

In the *Gorgias*, Socrates hacked away at Callicles' naturalistic justification for the rule by the "stronger," pointing out that this would justify rule by the majority, for whom justice means sharing equally (489a). He endorsed the right to rule by those who can exercise self-discipline in managing limited resources, illustrated by the parable of the leaky jars where the "temperate" man whose jars are filled with various liquids, the sources of which "are scanty and hard to come by, procured only with much hard labor" is free from worry because his jars are in "sound condition" (493e).

With his emphasis on individualism and "the rational element" in both the microcosm and the macrocosm, Plato continually leads us to the expert, the ethical individual who can manage his own and the state's economic and political affairs. There is no room in this closed circle for a social process in which "the multitude" can participate in self-rule or manage economic affairs. Unable to master the esoteric requirements of administrative expertise, their best course is to perform their assigned tasks in the economy in submission to the expert.

Consistent with his theory of knowledge, Plato never raises the possibility of *two* experts, whether physicians, ship captains, or philosopher-rulers, who have different recommendations. He assumed that the knowledge which gives the expert "true" ideas is a fixed entity so that there would be no disagreement among the few with "right reason" who are able to master the subject. As discussed in more detail in Chapter VI, he assumes that the "proper" objectives

of any society are a matter of fact and not a subject for debate and choice, that there is, in other words, only one destination for the "ship of state," and that knowledge by the expert provides either an intuitive grasp of this "proper" objective or the closest rational approach to it. In the *Laws* (896e), where the universal soul as the matrix of rationality is discussed, he alludes to the necessity for the existence of at least two souls or rational principles in the universe. This may be a concession to a theory of equilibrating opposites at the abstract level and to Heraclitean views of the dynamic tension implicit in apparently stable phenomena. However, this aspect of Plato's philosophizing never appears in his social theory.[58]

Plato's Ethical Individualism

One of the reasons Plato's ideas have been thought congenial to contemporary democratic ideology springs from the impression that individualism per se is the hallmark of democratic political philosophy. A distinction must be made, however, between the modern concept of social process, in which the individual is one of a large number who mutually generate a functioning society responsive to their many individual needs, and Plato's individualism. The former stresses both the individual's participation in the social process and the responsiveness of the system to individual needs. The latter, however, is a moral or ethical individualism devoid of any concept of a policy-forming social process. It emphasizes the importance of individuals disciplining their own characters—ruling themselves—and developing in themselves a harmonious, orderly spirit and allegiance to values consistent with Plato's vision of the just and orderly state. The moral burden of the individual, in Plato's view, is to order his inner psyche and to adapt to the ideal role for which he is by nature most fit, to fulfill his assigned role—and no other—in the static, ordered state. The Stoic ideal of the passive acceptance of one's circumstances and the cultivation of inner peace through indifference to adversity is an expression of this perspective. For the few with the capacity to rule, ethical individualism means a life of self-control dedicated to administering the affairs of the political economy. There is no social process for determining roles and values, for these are determined by the expert in Plato's administered economy. As has been noted of his political theory, "the genuine statesman, just as the genuine physician, is defined by his scientific understanding of his art rather than by the consent of his subjects to what he does to them."[59] Nor is there a conception of responsiveness to individual needs; in the administered state, the philosopher ruler is concerned with *general*, not *individual* welfare.

One of the most interesting aspects of Plato's essentially theological view of "divine" rationality and its expression in the individual is his appropriation of the democratic revision of the traditions of the shame culture of ancient Greece. In the *Gorgias* (483b ff.), Callicles reiterates the traditional thesis that it is shameful for a man to be subjected to indignities or wrongdoing by others, but that it is perfectly reasonable for a man to assert his power over others if he can. It is argued that objections to this outlook will come only from the weak, the potential victims who have banded together to repress the outstanding or powerful individual by claiming that it is shameful to "overreach" or to "do wrong" or assert arbitrary power over the weaker. Plato appropriated this thesis, that it is more shameful to do wrong than to be the victim of wrong, as he had appropriated the popular emphasis upon expertise, and internalized it into a personal ethical maxim. He repeatedly argues that, except in cases of ignorance, ethical self-interest (ethical hedonism) will prevent any individual—and most particularly a ruler—from voluntarily being unjust to others because this would damage the inner harmony of his own psyche or soul. He defined justice in the individual as concern for the order and internal harmony of one's inner self. Snell[60] persuasively develops the thesis that Plato follows a theory of personal gain by "calculation and reckoning" in developing his argument that moral self-interest is the ultimate to be sought by the individual. As noted earlier, the principle that a man cannot be unjust to himself had a much fuller practical relevance to the legal and economic theory of the day and was developed more fully in Aristotle's theory of exchange in Book V of his *Nicomachean Ethics*.

Plato's assertion of a sympathetic resonance between the harmony or good of the individual soul and the harmony or good of the state solved, for him, the problem of whether "justice pays." In his view, the good of the individual soul and that of the state are concurrent phenomena. Justice is beneficial because it leads to inner peace. Justice in the microcosm, within the individual, is a voluntary commitment out of moral or ethical self-interest and will only be deviated from through ignorance (which can be corrected by instruction from a philosopher if one has a rational element). Justice or order in the state administered by a just ruler follows the same blueprint writ large. This formulation provided Plato with a basis for rationalizing the power to which a circle of Athenians clung with tenacity and assertions of individual prerogative despite opposition from democratic elements. Later, with his hopes of imposing a benevolent, paternalistic order fading, Plato made some practical concessions in the *Laws* and *Statesman* to formal legal systems as "second best" to the rule of the unfettered philosopher-king. The constitutional system

seemed to him the one last opportunity for the proper structuring of defined roles and duties in an ordered system of political economy promulgated by a superior lawgiver. In the course of this adjustment, he explored many of the formulations of political structure that have influenced subsequent thought.

The Limits of the Law

A major line of emphasis in the *Republic* is on the close correlation between the rational control the individual should exercise over his own tripartite psyche and the principle of rational administration by the philosophical leader over the three parallel elements of the political economy and their social counterparts. There is a clear statement of Plato's compromise with law as the "second best" system of rule in the *Statesman*. This dialogue, written in his later years, may be treated as a theoretical supplement to the *Laws*. In it, Plato squarely confronts the problem of law as a bureaucratic restraint upon the freedom of judgment and flexibility which, he believed, should ideally be vested in the most outstanding intellectuals capable of applying the highest order of refined understanding to any given situation. He idealizes a government of men over a government of law: "The art of kingship [administration]," he wrote, "include[s] the art of lawmaking (rulemaking). But the political ideal is not full authority for laws but rather full authority for a man who understands the art of kingship (administration) and has kingly (administrative) ability" (294a). This insistence upon the expert as the superior source of law is consistent with his assurance that reality exists as intellectually knowable ideal forms best approached by rational inquiry. This rationality is the property of a very few; all others are capable of only an imperfect approximation of valid truth through empirical observation, through belief rather than knowledge.

Law, Plato explains in the *Statesman* (294a–b), is inherently imprecise: it "can never issue an injunction binding on all which really embodies what is best for each; it cannot prescribe with perfect accuracy what is good and right for each member of the community at any one time. The differences of human personality, the variety of men's activities, and the inevitable unsettlement attending all human experience make it impossible for any art whatsoever to issue unqualified rules holding good on all questions at all times." This is a very perceptive statement of the bureaucratic dilemma of attempting to draft rules which must be applied to a multitude of unique situations.

Because of the inherent difficulties of applying law in a flexible way, Plato's preference was for personal administration by an exceptional, rational individual with "kingly ability," unfettered by rules and restraints, who would as-

sign roles and duties to citizens on the basis of their individual capacities and temperaments and in the light of the needs and circumstances of the day. One science, it is observed, covers both the management of an estate (private economic affairs) and the management of a city (political affairs), and it may be called "royal science, political science, or science of household management" (259c). The chief concern of this science is managing people, for "the king is never concerned with directives concerning lifeless things in the way the master builder is. Kingship is a nobler thing; it works among living creatures and its functions have to do with these alone" (261c–d). It will be remembered that Xenophon's emphasis in his *Oeconomicus* was also on the art of personnel management as the important variable in both military and productive activities.

After summarizing the bureaucratic shortcomings of the legal process, Plato sets out to find why a legal system is necessary, "seeing that law is not the ideal form of control" (294d). He compares the problems of administrative order with those in the training of athletes. Just as the athletic trainer must give "bulk instructions having regard to the general benefit of the average pupil" (294e), so the legislator "will never be able in the laws he prescribes for the whole group to give every individual his due with absolute accuracy," but must follow a "method of bulk prescription . . . whether he makes a written code of law or refrains from issuing such a code, preferring to legislate by using unwritten ancestral customs" (295a).

Next, using the example of the physician as the prototype of scientific expertise, Plato's spokesman points out that if the physician leaves his patient for a period of time to travel, he would be justified in leaving a code of instructions for his care. The physician, however, should be free to change his prescription later if events warrant. In the same manner, the expert lawgiver who gives instructions in the form of a code of law should later be able to alter such laws at his discretion if changes appear to him to be needed. The expert, in order to provide the best expertise, should be above the law and his art not subject to its control (295e–296a). This view of a law code as a constitution to be followed in the absence of an inspired lawgiver is one of the first rationalizations for constitutions as bodies of law with higher status than ordinary laws. Plato is not here advocating rule according to a constitution above rule by a scientific lawgiver but, in the absence of an expert with superior powers of discretion, he believed a code should be followed.

The popular democratic view of the process by which laws should be changed is raised with the statement, "They contend that if a man discovers better laws than those already enacted he is entitled to get them brought into effect, but only if in every instance he has first persuaded his own city to ac-

cept them" (296a). This suggestion that ordinary citizens have a role to play in the political process—that they should be persuaded—is met with the argument that "better laws"—laws desirable in the opinion of the expert lawgiver—should be imposed by force, just as the physician "forces a particular course of treatment" (296b) on a patient.[61] A participative political process is here specifically rejected. Whether the "ruler does what is really beneficial," not whether his actions are "according to a code or against it," is "the only genuine test of good government in a community and the only principle by which . . . the ruler will administer the affairs of those whom he rules" (296e–297a).

Plato makes a very persuasive case for a political economy run by experts, capping it off with illustrations where the vesting of authority in experts is generally considered necessary. A gruesome picture is drawn of a law-ridden society where not only are ship captains and doctors required to practice "by the code," but they are also restricted from inquiring into possible innovations or variations in regimen (298 ff.). The other arts are subjected to the same indignities, being ruled by magistrates and citizens in popular assemblies with no knowledge of the technical arts. The worst scenario is a community where a magistrate is placed in power "either by election or the fall of the lot" (300a) to supervise such arts as the "building and manufacture of all types of implements," as well as farming (299d), who deviates from the code "but does not act on any basis of scientific knowledge" (300a). In general, the attempt by the "multitude" to rely on a law code and elected officials without the guidance of a superior intellect is pictured as a hopeless process that prostrates society. He even takes this opportunity to ridicule the procedures for public accountability of officials by comically portraying "experts" such as ship captains and doctors being hauled before citizen tribunals for "failure to sail the ships according to the written laws or the ancient custom of our forebears" (299a). Plato must have considered the procedures for formal accountability of public officials, as followed in a democracy, the ultimate indignity to the superior intellectual holding public office.

There is a definite allusion to the stifling of individualistic thought and the condemnation of Socrates when a law against "independent research" is proposed (tongue in cheek). Anyone found guilty of this "crime" by "any citizen . . . desiring to indict him" is to be brought "before a court of justice—or whatever passes for such a court—on the charge of corrupting the younger men" (299b).

It is clear from these passages in the *Statesman* that Plato is here summarizing the problems associated with the political regulation of economic activities and of the exercise of technical expertise. His defense of the freedom of

the technical expert from regulation in both the political and economic spheres is never supported by anything more than his faith in the internal ethical and rational commitment of the expert to his own standard of performance. It remained for Aristotle to structure this problem more coherently with his theory of the natural limit in Book I of the *Politics*.

Plato applies his theory of knowledge to the political process with the same results as with its application on a more abstract level: the ignorant and impressionistic observe and arrive at belief (the democratic process), while the intellectually competent apply rational insight and arrive at knowledge (administration by the expert). He concedes, however, that even a political economy administered by an expert will have to have laws (the "bulk instructions" for large groups and directions to be followed in the expert's absence). It follows, therefore, that if men have to make laws, and it appears that they do, they should be followed to the letter (300b–c). This becomes a theory of rule by constitution with an elite input.[62] His value criteria for laws remain somewhat vague, primarily emphasizing "what is really beneficial" (296e)—but not for whom—and that effective laws are made by experts and bad laws by the inept and ignorant "multitude." He maintains that "the true statesman" should be able to change the rigid law that others must hold to "and pay no regard to written prescriptions" (300c).

Plato's difficulty was that he could not temper his notion of the superior individual with any notion of social restraint. He envisioned laws as properly serving as a restraint on the "multitude," but not on the intellectual elite. His ultimate conclusion—that there should be a strict code of law for the "multitude" but freedom from restraint for exceptional individuals—presaged the eventual separation of political economy into political science and economics which has resulted in a dualism between the acceptance of a government of law in the political sphere but relative free play for the unfettered individual in the economy. Having given up on the hope of a government supervised by an unrestrained philosopher-king, Plato accepted as "second best" an aristocracy with a rigidly enforced legal code enshrining the wisdom of an earlier lawgiver.

In the latter part of the *Statesman*, Plato surveys the different forms of government "which arise when men turn down the idea of the one true and scientific ruler" (301c), comparing their codified and more capricious expressions. Constitutional kingship is counterposed to debased rule by one (tyranny). Rule by a few is divided into aristocracy and oligarchy, the former the rule by a few with strict adherence to a legal code, the latter the arbitrary exercise of power by a few. Democracy, as with the other forms of government, is divided into two forms, "obedience to law or contravention of law" (302e). If it follows a strict code of laws, democracy is the worst of all governments, since a code

will not only make it bureaucratically inflexible, it will also stifle competent leadership. However, despite earlier statements, it is concluded that an unregulated democracy without a constitution or law code is the best government of all (303a), apparently because of the opportunity for the superior individual to exercise his capacities without hindrance. This groping rationalization of the free play of leadership is the closest thing to a theory of social process found in Plato's political thought, other than his one-on-one approach to education. It is embedded in a pattern of exposition that is fragmentary and discontinuous as well as somewhat contradictory. The ultimate conclusion is that monarchy is the best legal form of government and that lawless democracy, with its connotation of laissez faire, is the best nonlegal form (303a–b), despite his reaffirmation of the virtues of the unfettered scientific ruler and his earlier insistence on aristocracy under law as the "second best."

In his writings Plato studiously avoided any consideration of a group dynamic that could effectuate good or improved economic and political organization. His thesis that the natural superiority of the outstanding individual will be less restricted in the most impotent system of rule, uncodified democracy, is an indication of his continued reliance on the administrative direction of the unfettered expert. However, the superior individual having to operate in a democratic setting without constitution or code is subject to all the problems of rhetorical manipulation so decried in the *Gorgias*. The cynical Callicles, as we saw, was willing to play that game.

Plato's formulation of "lawless democracy" anticipates the concept of a laissez-faire market economy in which a natural process is presumed to replace the necessity or desirability of legal restraint. The freedom of operation of the unfettered individual seeking to serve his own best interest, as Plato noted, not only permits the floundering system to function, but promotes its excellence. One may recall the detail with which Plato developed the chaos resulting from the regulation of the exercise of technical and managerial expertise and suggest that he may have been groping toward some rationalization of the immunity of the economic sector from control by the political. He was never able to free himself from his extreme reliance on rationality and ethics as the only acceptable restraints on the expert, nor did he develop any theory of social process, such as natural regulation through competition, to animate and regulate his system in the public interest.

Although the historical Socrates may have absorbed his use of the dialectical method from its institutional matrix in the formalized exchanges in the assembly and law courts of ancient Greece, Plato, unlike Protagoras, was not prepared to expand this technique of formal debate into a concept of process by which acceptable social consensus might be achieved. He limited himself

to an absolutist theory of ultimate truth which gave the rational individual supreme confidence in his own rectitude and in his moral and intellectual superiority over all who disagreed with him. Plato takes it completely for granted that the expert will arrive at the "best" way to achieve the "best" end through reason. As a result, he never finds it necessary to give any criteria by which the objectives of the expert can be judged, other than the vague reference to the "greatest possible happiness of the city as a whole." Rationality, however, is a technique for efficiently or consistently achieving a given end, not a criterion of the end itself. He thus commits the naturalistic fallacy of assuming that the "best end" is a fact rather than a moral choice.[63] While the "best" way or method to achieve a given end may be a value-free fact, the determination of the "best" end itself is a value judgment. In this light, Plato can be identified as the theologian of the administrative tradition.

PART TWO

THE PARTICIPATIVE PROCESS: DISTRIBUTION, BARGAIN, AND PUBLIC DECISION

V The Distribution of Shares: From Negotiation to Public Process

Those two fatal words,
"Mine and Thine"
—Cervantes, *Don Quixote*, II.3.

The image of a god—or of a patriarchal authority—providing the anthropomorphized force for organizing and administering the beginnings of human social order is symbolic of the administrative tradition of Part One. Such father figures appear in the earliest mythic traditions of peoples all over the world, and the ancient Greeks were no exception. The realism with which the Greek gods were endowed with human qualities is legendary. While pictured at times as overpowering and majestic and far removed from the petty concerns of human beings, at other times they are invested with the whole range of human foibles: they lust, steal, and sulk; sometimes they have terrible tempers.

Isolated Distribution: The Promethean Transaction

Zeus and Prometheus, in Hesiod's *Theogony*, are portrayed as gods with very human qualities. The account of their division of a slaughtered ox has significance, perhaps beyond Hesiod's understanding or intention, as a mythic treatment of the distribution of shares in a common venture harking back to a hunting tradition even more ancient than patriarchal or administrative order.[1] It is an example of pure isolated distribution where two parties meet on an equal footing and negotiate the division of a joint asset. This Promethean transaction, negotiated outside the shadow of any administrative authority, catches the essence of the participative process with a different structuring of human interactions and a different concept of virtue or justice in human relations.

It will be remembered that in Greek mythology Prometheus, whose name means "forethought," is portrayed as a particular advocate and protector of mankind. He is characterized in Hesiod's *Theogony* as "of the intricate and

twisting mind" (510–15) and "versed in planning beyond all others" (555–60). When Prometheus steals fire from the gods to give to man, Zeus, in retribution for disseminating the knowledge of this force, sends a lovely woman (Pandora) with a box of evils as a companion for man, a variant of the story of Adam and Eve and the fruit of the tree of knowledge.

Despite the somewhat tangled chronology of events in Hesiod's account, it appears that the problem between Zeus and Prometheus is related to Prometheus's audacity in attempting to outsmart Zeus. Prometheus,

> eager to try his wits, cut up
> a great ox, and set it before Zeus,
> to see if he could outguess him.
> He took the meaty parts and the inwards
> thick with fat, and set them
> before men, hiding them away
> in an ox's stomach,
> but the white bones of the ox he arranged,
> with careful deception,
> inside a concealing fold of white fat,
> and set it before Zeus.
> (535–45)

Prometheus then asked Zeus to choose his portion. According to Hesiod's contradictory account, Zeus, although aware of the deception, chose the portion with the fat and bones instead of the meaty one. This division of the meat between Zeus and mankind, with Prometheus serving as man's agent in the transaction, was a prototype for the arrangement between men and gods in temple sacrifice, for

> Ever since that time the races of mortal men
> on earth have burned
> the white bones to the immortals
> on the smoky altars.
> (555–60)

As a result, men have been able to keep for themselves the more edible and useful parts of animals sacrificed to the gods. The idea of an enduring commitment growing out of the distribution of meat is possibly the basis for the ritual of the partition of sacrificial animals[2] as a ceremonial accompaniment of oaths and treaties in both ancient Greek and Hebraic traditions. This perspective on distributive justice is replete with emphasis upon the sword as an essential element in the ritual and may account for the Hebrew term meaning

to *cut* a covenant and the Greek custom of speaking of *cutting* oaths and *cutting* treaties instead of making them.[3]

To understand the importance of the Promethean transaction, it should be recalled that the system of public finance in ancient Greece was centered in the institution of temple sacrifice in the form of the meat distributed at common meals and at festivals and the hides which were a basic unit of trade. Further, according to Andreades, the "first circulating coinage took the form of spits and received the name 'obol'" from the "custom of distributing the sacrificial meat."[4]

Zeus's indignation at being deceived, according to Hesiod, was the cause of his withholding fire from mankind and also of his terrible punishment of Prometheus:

> And in ineluctable, painful bonds
>   he fastened Prometheus
> of the subtle mind, for he drove a stanchion
>   through his middle. Also
> he let loose on him the wing-spread eagle,
>   and it was feeding
> on his imperishable liver, which by night
>   would grow back
> to size from what the spread-winged bird
>   had eaten in the daytime.
> (520–25)

The meat division portrayed in the Promethean myth gives us a glimpse into man's distant past. Two men join in a hunt outside the circle of presumptive sharing within the extended family. When a kill is made it must be divided between the participants. The Promethean transaction echoes such an ancient scenario. It structures a procedure for the quarrel-free distribution (but not exchange) of a jointly acquired good in an isolated setting.[5] Prometheus divided the meat into two piles, as he chose. Zeus then selected one of the two piles of meat, as he chose. Both parties are thus locked into their share by their voluntary acts of apportioning and choosing. In this structuring of distribution, Prometheus would ordinarily have been motivated to make the two piles of meat as equal as possible to the point that he would be completely indifferent to Zeus's selection, since the remaining portion, which would be his, would be as large as Zeus's if the division had been equal. Any inequality Prometheus might make in the division introduces a chance of his receiving an unequal, larger share, but also the risk of an unequal, smaller share. The risk of receiving a smaller share would, however, be purely voluntary, and he

would not be free to complain without indicting his own integrity or intelligence. A devious divider who gets the smaller share may be chagrined but can hardly cry foul. The chooser, on the other hand, has the freedom of inspection and makes his own voluntary choice free from duress. If he gets the smaller portion he can hardly protest that he has been cheated except by his own voluntary act of choice, since he could as easily have chosen the other portion. Both participants will thus be committed to the outcome of the distribution by the element of voluntarism.[6] In this case, although Zeus was represented as being unhappy with his portion,[7] he honored the distribution. This is one of the earliest formulations of the principle that an individual cannot voluntarily be unjust to himself where justice is defined as the order resulting from the mutuality of free subjective choice.[8]

Hesiod appears to be ambivalent in his description of the Promethean transaction, overlaying it with the attribution of omniscience to Zeus but at the same time representing him as having voluntarily chosen the inferior portion. Zeus is portrayed as being angry with his share, but in the logic of the situation he should only have been angry with himself for making a poor choice.

There are indications that the method of division of shares in the Promethean transaction was used in a wide variety of circumstances. In classical times the division of booty was frequently made by this method of division and choice. For example, after one battle, Kimon had the booty divided into two shares, one consisting of the captives and the other of their personal possessions. The allies chose the personal property, while the Athenians were left with the captured troops which they later ransomed.[9] Finley mentions the use of the method in the division of an estate.[10]

A variant on this process was the *antidosis*, described by Andreades as a "peculiar and clever institution" by which "the state succeeded in devolving upon private individuals the disagreeable duty of deciding what citizens should be taxed and of adapting the liturgies to the constant changes in the distribution of wealth."[11] When a private citizen was designated to finance a public religious ceremony, he could "indicate" another citizen who was financially better able to undertake the burden. The citizen so "indicated" had either to finance the liturgy out of his own assets or to exchange his property with that of the challenger. After the exchange, the challenger then had to finance the liturgy with the new property. Andreades notes that by classical times this custom had been changed to permit resort to the courts for adjudication of the dispute. In its broadest terms this, like the method of division in the Promethean transaction, is a system for comparative evaluation of assets which incorporates the mutual subjective perspectives of those concerned. It was a

self-regulating device used in the absence of a market system as a reference base for value.[12]

The Promethean transaction may be viewed as a distributive expression of the natural social compact thesis. Based upon rational voluntarism and equality, both are dependent on an arena protected by custom or by an administrative authority from the exercise of arbitrary power by either party. The problem is clearly demonstrated by one of Aesop's fables which goes back to the primitive division of the spoils of the chase and is one of several fables giving rise to the expression "the lion's share." It seems that a lion, a fox, and an ass participated in a joint hunt. On request, the ass divides the kill into three equal shares and invites the others to choose. Enraged, the lion eats the ass, then asks the fox to make the division. The fox piles all the kill into one great heap except for one tiny morsel. Delighted at this division, the lion asks, "Who has taught you, my very excellent fellow, the art of division?" to which the fox replies, "I learnt it from the Ass, by witnessing his fate."[13]

This fable makes clear the dependence of any system of distribution upon the social or power context in terms of which it takes place.[14] The system for distribution in the Promethean transaction may have been conceived in a participative context by two individuals engaged in a joint hunting venture who stood on an essentially equal footing. It is a system which requires, as does the social compact, a joint commitment by the participants to an ongoing relationship which will protect the volitional character of the transaction. An alternative possibility is that the system may have been devised by an administrative authority to settle disputes between individuals where the authority itself had no conflicting interest in the subject matter of the distribution but was only concerned with the maintenance of order. As such, it would function as a system for regulating special cases of two-party distributions in the tradition of bureaucratic individualism discussed in Chapter I. As noted earlier, large-scale distribution patterns in any administrative bureaucracy can, and probably always have, become institutionalized for the simple reason that the exigencies of administrative order and the delegation of authority require generalized standards of consistent measure and uniform allocation to essentially anonymous units in the system.

The vitality of ancient Greek culture depended in part on a mixture of a somewhat dilute authoritarian administrative tradition interacting with a more primitive participative tribal way of life, a blend discernible in the *Iliad*. It was more likely the participative facet of the blend which stimulated the conception of a self-regulating distributive system based on rational self-interest, a formulation which must have predated any notion of market exchange and

which even then was subject to failure as a result of successful deceit (Prometheus's trickery) or the assertion of raw power (the "lion's share").

The Political Economy of Warfare

Colored though it may be with shadings of status and honor, dominance and subservience, as well as religious intervention, one of the most conspicuous themes of the *Iliad* is an economic and legal confrontation between Achilles and Agamemnon over the distribution of the returns of warfare (booty).[15] Although nominally about the siege of Troy, at least as much of the epic is devoted to this confrontation as to actual warfare. The story is built around Achilles' claim to his allotted share of booty taken in a raid incidental to the siege. To reverse their ill fortunes in war attributed to the displeasure of Apollo over the capture of Chryse, daughter of one of Apollo's priests, the general sentiment was that Chryse, a part of Agamemnon's booty, must be returned to her father. Agamemnon then insists that if Chryse is given up, she must be replaced with Briseis, Achilles' prize. The dispute over the rights to booty occurs in the setting of public meetings of the Greek forces.[16]

"All wars," according to Plato (*Phaedo* 66c) "are undertaken for the acquisition of wealth." The motivation of most of the participants in the venture described in the *Iliad* is unmistakably a concern for gain, a kind of entrepreneurship in search of plunder that could be carried home. Odysseus is referred to as a "sacker of cities" (II.259–85), and he admonishes the Greeks that "not until thou hadst sacked well-walled Ilios shouldst thou get thee home" and that "it is a shameful thing to tarry so long, and return empty" (II.286–313). According to Thucydides (I.5), the pillaging of other peoples by the early Greeks was the "main source of their livelihood," for, he observes, "no disgrace was yet attached to such an achievement, but rather credit." Moreover, the practice of *argyrologia*, "a forcible collecting of wealth," was part of public finance in ancient Greece even after state treasuries were established in classical times.[17] Richard B. Onians gives a clear picture of the Greek attitude:

> Piracy, raiding at large for human and other booty (e.g., *Od.* I.398, XIV.246 ff.), is an honorable trade. Without offence one asks highly respectable strangers, whom one has entertained, whether they are merchants or pirates (*Od.* III.71; Cf. *Il.* IX.406; *Od.* XXIII.356 ff.). Successful theft and perjury are admired. Odysseus visits Autolykos, "his mother's noble father, who excelled all men in thieving and perjury. This skill the

god himself gave him, even Hermes; for to him he burned acceptable sacrifice, the thighs of lambs and kids" (*Od.* XIX.395 ff.).[18]

A. M. Snodgrass mentions that warfare was "as much an economic activity in Archaic Greece as it was a political one."[19] H. Bolkestein refers to warfare as a "trade" that was "carried on by the State." He remarks, "At first sight we may wonder that war is ranged among the enterprises, deserving a place in a description of economic life, but we are entitled to do so by the circumstances that their principal object often was the booty, to be distributed among the lucky participants."[20]

With the disintegration of traditional economic and political life in the fourth century B.C., there was an upsurge of individualistic participation in warfare, resulting in what Harvey F. Miller calls a "mercenary explosion" and the development of central marketplaces for the hire of mercenaries, the most famous of which, he says, were at Cape Malea and Cape Taenarum.[21] John K. Ingram, better known as an economist than as Regius professor of Greek at Dublin, contrasted the ancient and modern attitudes. "There is this essential difference," he wrote, "between the spirit and life of ancient and of modern communities, that the former were organized for war, the latter during their whole history have increasingly tended to be organised for industry, as their practical end and aim."[22]

The Division of Booty

Although massively destructive, the complete appropriation of the wealth of other peoples or cities was obviously more remunerative than trade or agriculture for the ancient Greeks, and such piratical conduct cast a shadow over every encounter between strangers in the absence of some stabilizing authority or custom which would prevent such violence. The division of booty was even the subject of a formal commitment between several communities. A. J. Graham cites an Argive decree dating to c. 450 B.C. relating to the division of booty with the Tylissians and Cnossians. According to the decree, "the booty which we win both together from the enemy, in the division they (i.e., the Tylissians) shall have a third part of everything taken on land, but a half of everything taken on sea. And the Cnossians shall have a tithe of what we take in common."[23]

Finley termed the accumulation of booty one of the "essential processes for the growth of wealth in the Graeco-Roman economy"[24] until curtailed by the pax Romana. With the acceptance of warfare as a normal form of economic acquisition, an institutionalized pattern for negotiations between raider and

city developed, as demonstrated in the *Iliad.* In a scene on the somewhat crowded aggregation of representations on Achilles' shield, a besieging force is contemplating offering "to divide in portions twain all the substance that the lovely town contained within" (XVIII.502–26). Obviously, once a threatened city had been invested by a besieging force and had become its potential captive asset, a bargaining procedure at this point would benefit both sides: to obviate the costs of the final assault for the besieging force, and, for the inhabitants of the city, to avoid losing all by resisting.[25] This notion of a fifty-fifty division, once the relative positions of the negotiating parties had been established, recurs in Aristotle's analysis of exchange in Book V of the *Nicomachean Ethics,* but even there it is used as a distributive formulation.

Later in the account in the *Iliad* of the siege of Troy, Hector, the leader of the Trojans, contemplates meeting Achilles in personal combat. He considers laying aside his weapons and armor and offering to return Helen and the treasure his brother Paris (Alexander) had stolen from the Greeks. The Trojans, he speculates, could also "make due division with the Achaeans [the Greeks] of all that this city holdeth." His musings are presented in almost the exact words used earlier to deseribe the scene on Achilles' shield. As further assurance to the Greeks, he would "take from the Trojans an oath sworn by the elders that they will hide nothing, but will divide in twain, even all the treasure that the lovely city holdeth within" (XXII.102–28). However, he thinks better of the possibility of making such an offer lest Achilles strike him down when he presents himself unarmed to negotiate. Hector resolves to fulfill his role as a defender of his city in the same classic tradition of heroic commitment of chief or king described earlier in the *Iliad* by Sarpedon. Sarpedon's description is cast in terms of a form of social compact between chief or king and community: the chief must risk all in battle in exchange for the glory and honor as well as the material rewards that are his (XII.299–328). Hector's decision to forgo an attempt at negotiation with Achilles is a reminder of a less heroic tradition of negotiation and ransom and also of the fragility of the presumption of mutual rational self-interest alone as an adequate basis for an egalitarian social compact.

Of particular interest in the political economy of warfare as presented in the *Iliad* are the internal relationships that held such a venture together. In his speech of encouragement to the Greeks, Nestor reminds the men of their "compacts" and "oaths" and "the drink-offerings of unmixed wine and the handclasps wherein we put our trust" (II.314–30, 341–66). This suggests the formal organization of the venture, with commitments among the participants. However, the leaders of this expedition are not vassals of an absolute monarch but are relatively independent military leaders, each with his own

following and his own expectations of profit from the enterprise. Because his position of authority is less than absolute, Agamemnon cannot lead the venture solely in his own interest. However, his duty to those beneath him is only vaguely defined. Nestor advises Agamemnon to divide the forces according to tribe and city so that the men will fight more readily in support of their own units and so that credit (i.e., booty) can be more effectively given in proportion to performance (II.341–66). This is a tactical recommendation in the tradition epitomized by Xenophon, but it also served as a rhetorical device to lead the discussion from whether to continue the fight to the question of how to continue it more effectively.

When Achilles attacks Agamemnon's decision to confiscate his prize to compensate for the loss of Chryse, he complains about the disproportionate distribution of the booty.[26] Even though, he says, "the brunt of tumultuous war do my hands bear," yet "thy prize is greater far, while I go to my ships with some small thing" (I.146–72), indicating a quid pro quo attitude toward the distribution of booty as a reward for service. Achilles threatens to abandon participation in the venture, saying that he has no quarrel with the Trojans and implying that he came only for booty. Later, it becomes apparent that palliating the affront to Achilles' status is a major consideration in the settlement of the dispute.

The distribution of booty in a political economy of warfare raises the same questions about rights of participants as occur generally in a distributive economy. Do rights to goods (property) vest solely in the distributing authority, be they rations or shares in booty, or are these property rights that can be asserted against the distributing authority by the participants? In the tradition of the authoritarian god-king, the lord can give and the lord can take away, but the world portrayed by Homer was a somewhat dilute representation of the vertically structured distributive economy. The situation in the *Iliad* is complicated by the fact that the booty had already been distributed so that there was no store to be drawn upon. Agamemnon is thus in the position of having to reclaim booty previously parceled out in which nominal rights had already vested. The resentment at the disturbance of the normal system of remuneration (booty distribution) is reflected in Achilles' challenge to Agamemnon's leadership over voluntary followers: "How shall any man of the Achaeans," he asks, "hearken to thy bidding with a ready heart either to go on a journey or to fight amain with warriors?" (I.146–72). In response to this challenge, Agamemnon then asserts his absolute authority over the disputed property (in this case, a human being), but not over Achilles' forces, by telling Achilles that he can leave if he wants and that he, Agamemnon, will personally take Achilles' prize, the woman Briseis, from his hut.

The dispute over booty in the *Iliad* portrays a clash between the authority of the leader and the volition of the participants in a venture when their customary expectations from the distributive system are not met. The confrontation between Agamemnon and Achilles, however, occurs in the setting of a traditional Greek public gathering place where the attitude of the assembled Greeks has some influence upon the positions taken by their leaders, and some of the elements of the participative process of the Greek *polis* are emphasized, including the repudiation of violence (at least between those of higher status) and the emphasis on discussion of issues.

When Achilles starts to draw his sword, the goddess Athene advises him, "Nay, come, cease from strife, and let not thy hand draw the sword. With words indeed do thou taunt him, even as it shall be." And she promises that if he restrains himself, "hereafter shall glorious gifts thrice as many be brought to thee by reason of this despite" (I.201–25).[27] This admonition to taunt "with words" rather than with weapons suggests a strong tradition against resorting to violence in the agora and of support for open, unrestrained debate in the public gathering place. It is supported by the comparison of Zeus's anger at "men that by violence give crooked judgments in the place of gathering, and drive justice out" with the violent torrents raging down the mountainside after a summer deluge (XVI.372–97). However, this respect for open speech, as well as the prohibition against violence, seemingly had a status limit, as indicated by the treatment accorded the commoner Thersites, discussed below.

The aged Nestor next takes the floor and, after asserting his age and status as a respected counselor of great warriors of old, advises Agamemnon not to assert his authority by taking Briseis from Achilles because "the sons of the Achaeans gave him her as a prize" (I.252–77). However, he then cautions Achilles against questioning the authority of a "sceptred king" with divine right.[28] Despite Nestor's intercession, however, Agamemnon asserts his intent to make an issue of Achilles' challenge to his authority and to put him in his place. Achilles then backs down and agrees to give up Briseis, "seeing ye do but take away what ye gave." However, he adds, "But of all else that is mine by my swift black ship shalt thou take or bear away naught in my despite. Nay, come, make trial, that these too will know: forthwith shall thy dark blood flow about my spear" (I.278–304).

What are we to make of this strange wrangle over rights to women taken as booty? It first of all reflects the political and economic matrix of the social life of Homeric Greece. There is the assertion of absolute authority by a leader, in the tradition of the god-ordained ruler, over the ultimate control of the distribution of booty in conflict with an independent tribal chieftain. Achilles finally grudgingly submits to Agamemnon's authority over the booty, but he

rejects his authority over his person as a warrior and over his personal property. Although reference had been made to the awarding of booty by "the sons of the Achaeans," in the end it was Agamemnon's authority that was recognized. This confrontation occurs against the background of a public debate before an assembled multitude where the views of experienced elders are heard. However, neither the opinions of the wise nor of the populace determined the outcome of the conflict.

The absolute authority of a leader, the circle of elders, and the public assembly are three major strands of traditional Greek life that Homer braided together in his tale, perhaps accepting the dynamic inconsistency as a realistic expression of his times. It is worthy of note that Agamemnon chose to send a herald to take Briseis from Achilles' hut to avoid a personal confrontation. From a tactical point of view, he lived to regret Achilles' alienation from the combat and actively sought to make amends. However, Achilles' ultimate return to the battle to face Hector was motivated or rationalized by his personal grief over the loss of his friend Patroclus.

The formalized structure of debate in the agora or gathering place is the most interesting aspect of this whole affair because it introduces an image of a public process for the settlement of disputes, in contrast with a rigid rule of custom enunciated by the elders or a tradition of absolute authority. It is hardly a democratic institution in the modern or even classical Greek sense, however. The seer Calchas required Achilles' promise of personal protection before he dared report his clairvoyant perception that the misfortunes of the venture were related to the capture of Chryse (I.68–90), and the commoner Thersites had trouble because of his low status.

When Agamemnon suggests at one point that the siege of Troy be abandoned and the troops rush to the ships to prepare to leave, Odysseus is instructed by Athene to persuade the Greeks to stay and continue the fight. Going to Agamemnon, he then "received at his hand the staff of his fathers, imperishable ever" (II.183–207). Armed with this symbol of absolute authority, Odysseus goes up and down the beach seeking out chieftains and attempting to persuade them to return to the battle and also reminding them of Agamemnon's divine authority: "Proud is the heart of kings, fostered of heaven; for their honour is from Zeus, and Zeus, god of counsel, loveth them" (183–207). Here we have the assertion of a god-ordained ruler with the authority of his office represented by the staff in the Near Eastern and Egyptian tradition, yet gentle persuasion is initially relied upon to maintain the allegiance of the leaders of the different contingents.

Odysseus's treatment of the common soldiers, however, was quite different, for "whatsoever man of the people he saw, and found brawling, him would he

smite with his staff, and chide with words, saying, 'Fellow, sit thou still, and hearken to the words of others that are better men than thou; whereas thou art unwarlike and a weakling, neither to be counted in war nor in counsel. In no wise shall we Achaeans all be kings here. No good thing is a multitude of lords; let there be one lord, one king, to whom the son of crooked-counselling Cronos[29] hath vouchsafed the sceptre and judgments, that he may take counsel for his people'" (II.183–207).[30]

When Odysseus succeeds in getting the Greeks reassembled, the issue of the distribution of booty arises again and he finds a further occasion to wield Agamemnon's staff of authority. Although described as physically repellent and "full of a great store of disorderly words," Thersites, an articulate commoner,[31] makes an eloquent protest couched in essentially the same terms as those used by Achilles[32] regarding the disproportionate distribution of booty between Agamemnon and the common soldiers who do the actual fighting:

> Son of Atreus [Agamemnon], with what are thou now again discontent, or what lack is thine? Filled are thy huts with bronze, and women full many are in thy huts, chosen spoils that we Achaeans give thee first of all, whensoe'er we take a citadel. Or dost thou still want gold also, which some man of the horse-taming Trojans shall bring thee out of Ilios as a ransom for his son, whom I haply have bound and led away or some other of the Achaeans? Or is it some young girl for thee to know in love, whom thou wilt keep apart for thyself? (II.208–34)

Thersites' impugning of the motivations of kings and his denouncing of them for their lust and greed at the expense of the common soldier gains for him a bloody back under the blows of Agamemnon's staff, wielded by Odysseus. He is isolated and humiliated with force and made the butt of jokes by the assembly.

The treatment of Thersites raises the question of the limits on the right to speak in the public forum.[33] Homer's reference to Thersites' "disorderly words" does not, apparently, refer to the content of his speech, which was cogent, but to the fact that he did not hold the staff which would have accorded him the right to speak, although it is questionable whether, as a commoner, he would ever have been handed the staff. The staff as the symbol of authority in the hands of the ruler served, when passed from hand to hand among those eligible, as an extension of that authority and a guaranty of the right to speak before the assembly. At the end of Achilles' impassioned verbal attack on Agamemnon, he dashes "the staff studded with golden nails" (I.226–51) to the ground.[34] The participants in a council meeting before a general assembly are described as "scepter-bearing kings" (II.74–101), which

suggests that the right to bear a staff and to speak at the public assembly was limited to a circle of leaders but that a specific staff was circulated to maintain order in the sequence of speaking.[35]

Decree and Public Process

Both the traditions of decree by an absolute ruler and public debate leading to the support of an activity involve the notion of words prior to action. The ruler speaks before his order is carried out. Debate occurs before a decision is made.[36] And, once there is a notion that words determine actions or outcomes, the words themselves, rather than the intent of the speaker who pronounced them, become the reference base in terms of which actions are taken or the future predicted. The notion is implicit in administrative systems which require the application of standardized procedures in the treatment of large numbers of individuals as essentially anonymous units. Once rules are established in a bureaucracy, it is necessary to enforce them according to a reasonable interpretation of their verbal meaning, even if this is contrary to the original intent of the administrator or ruler, for otherwise subordinates with delegated authority would be afraid to act for fear the rule under which they operated might be changed without notice or that they might misinterpret it and be punished. The words begin to take on a life of their own: this is the beginning of the abstract concept known as law.

This notion of an ongoing rational consistency which gives rise to the idea of law is reflected in Zeus's reply to Thetis, Achilles' mother, when he agrees to her request to prevent the Greeks from being victorious until the wrongs inflicted on Achilles have been rectified: "No word of mine," he says, "may be recalled, nor is false, nor unfulfilled, whereto I bow my head" (I.514–39). The presumptive expectation of consistency on the part of a god is reflected also in Chryses' two prayers to Apollo. In the first (I.40), he asserts that, since he has frequently given offerings to the god, Apollo should grant his request. In the second (I.455), the approach is that since Apollo has protected his interests in the past, he should be able to expect him to continue to do so.[37]

The same concept of rational consistency is illustrated by the account of Zeus's being blinded by the goddess Ate when he attempted to allocate a domain to Heracles. Agamemnon uses the story to justify his claim of having himself been blinded by Ate when he reclaimed the booty already distributed to Achilles. According to the story, Zeus proclaimed that a child of divine blood would be born on a certain day who would be "lord of all them that dwell round about" (XIX.97–124). Hera, with devious intent, chided him

into repeating the pronouncement as an oath. She then quickly hurried the labor of another woman, to whose offspring the terms of the proclamation would also apply, and delayed Heracles' birth so that the decree resulted in an outcome different from Zeus's intent. Still, the decree had to be honored.[38] The oath of Zeus as the supreme authority can be nothing more than the formalization of his decree and is presumably equivalent to his "bowing his head" in his pronouncement to Thetis. The possible relation of the Greek word for justice to this administrative tradition of pronouncement is of interest. According to Eric A. Havelock, the Greek word for "justice," singular or plural (*dike* or *dikai*), means "something spoken aloud," and he notes that one of the proposed etymologies of *dike* attributes it to "the root *dik*, meaning 'say,' 'speak,' as in Latin *dico, judico*."[39] Our modern words *decree* and *edict* connote similar meanings.

In the final assembly in which the dispute over booty is settled, Achilles publicly deplores the losses the Greeks have suffered because of his failure to participate in the fighting since the dispute arose. He vows, "These things will we let be as past and done," and urges a renewal of the attack on the Trojans (XIX.49–75). Agamemnon then concedes that he made a mistake and, in an unusual move, speaks to the gathering from his place in the audience rather than taking the position, scepter in hand, for a formal speech. Before the assembled crowd, he assures Achilles that he will make good his offer to restore the confiscated booty and that he will, in addition, make extensive gifts to him. This compromise had been worked out by the elders, thus fulfilling Athene's promise to Achilles that if he pursued the dispute by verbal or rhetorical processes rather than by violence, he would be rewarded threefold.

The importance and status of the "verbal process" in the life of the Greeks even at this early date is suggested by Homer's placing participation in public discourse on the same footing with warfare. He casually mentions that, until the dispute over booty was settled, Achilles never went "forth unto the place of gathering, where men win glory, nor even unto war" (I.488–513). What Homer has pictured in the *Iliad* is the ascendance of a public process for the resolution of disputes over the dispensations handed down by a nominally absolute authority. Havelock recognized this participative aspect of the solution of the economic and legal confrontation between Achilles and Agamemnon when he wrote, "In sum, the 'justice' of the *Iliad* is a procedure, not a principle or any set of principles. It is arrived at by a process of negotiation between contending parties carried out rhetorically. As such, it is particular, not general, in its references, and can be thought of either in the singular or in the plural—the 'right of it' in a given case or 'the rights' as argued and settled in

one or more cases. . . . The procedure takes place in public because, in a preliterate society, the memory of the public is the only available attestation as to what is promised or agreed to."[40]

Havelock's statement catches the spirit of the common law of England with its emphasis on case and controversy in the practical development of law expressed in the principle of *stare decisis*—"to stand by decided cases," "to uphold precedents." He derives the role of the elders in settling disputes from a tribal background in which traditional or customary law is interpreted and applied to specific controversies, and he suggests that this process could not function outside the stabilizing arena of the community. He does not, however, consider the influence on the development of the deliberative process of the administrative decree from a distant authority subject to interpretation and application by a local official which also provided a stabilizing arena for rational dispute. Havelock is of the opinion that the rhetorical processes which were brought to bear on the settlement of the dispute over booty in the *Iliad* could not have been used in disputes between city-states because no common agora or "gathering place" existed as a stabilizing arena in which the process could operate. "Between Greeks and Trojans," he writes, "'justice' cannot exist, only the inaction of peace or the activity of war. So *dike* vanishes from the epic when Achilles takes the field, returning only when confrontation with the enemy is replaced by a fresh assembly and a fresh dispute between the Greeks themselves."[41]

However, the assertion that there was no opportunity for the exercise of speech and argument in ancient international or inter-city contacts because there was no institutional framework to support it overlooks the importance attached to Odysseus's rhetorical style when, with Menelaus, he served in an embassy to the Trojans. Helen observed that Odysseus knew "all manner of craft and cunning devices" (III.202). Antenor took particular note of Odysseus's skill in holding the attention of his listeners when the ambassadors "began to weave the web of speech and of counsel in the presence of all" (III.213) and reported his performance as being so spellbinding that "no mortal man [could] vie with Odysseus" (223–25). The discussion of arbitration in the *Oxford Classical Dictionary* (1970 ed.) stresses its particular importance in interstate relations. Most peace treaties after the mid-fifth century B.C., it is reported, contained clauses requiring disputant states to submit their disagreements to arbitration.

In the ritual of supplication which, in effect, allowed the closed social unit of ancient Greek society to receive an outsider or foreigner without violence, effective and appropriate speech played a significant role, although ritual gestures were equally important. When Odysseus implores Nausikaa for hospi-

tality (*Od.* VI.143), he uses "gentle words" because, in the circumstance, a naked shipwrecked sailor rushing out from his hiding place and grasping at the knees of the maiden to whom he appealed, the usual form of supplication, might have been misinterpeted.

In supplication, the outsider, by going through "a series of gestures and procedures that together constitute total self-abasement" enforces on the supplicated a claim for protection. Part of the "procedure" is the verbal appeal by the suppliant, in which he "will use language which reflects humiliation upon the speaker while correspondingly according extravagant recognition" to the person addressed.[42] When Priam approaches Achilles to recover the body of his slain son, Hector (*Il.* XXIV.477.556), he begins a ritual supplication, but it is his heartfelt verbal appeal that stirs in Achilles his sense of personal doom and reminds him of the sorrow his own father will suffer at his death. The bond between victor and vanquished created by Priam's moving appeal is the turning point in the episode, lifting the relationship from ritual abasement reciprocated by formal magnanimity to mutual human sympathy. One has the feeling that Achilles would have released the body of Hector to Priam on the strength of the verbal appeal without the proffered ransom, but he falls back on its acceptance as a ritualistic justification for abandoning his posture of vengeance for the loss of his comrade, Patroclus.

The emphasis on effective speech[43] makes clear the importance of the rhetorical process not only in two-party transactions and public gatherings but even in a panhellenic setting. It is a central feature of the epic account of the unfolding dispute over the distribution of booty and the rights and powers appropriate to the head of the expedition. The formal passing of the staff, a symbol of authority held by each speaker in turn, gives each a chance to demonstrate his rhetorical power before his peers and before the populace. Although the "multitude" had no more status than did Thersites, the leadership was undoubtedly influenced by a speaker's effect on the assembled crowd. The *Iliad* is not only an account of a major economic and political confrontation where an enterprise is threatened by a dispute over the administration of the distributive process in a world dominated by an individualistic, status-conscious elite. It is also an account of the gradual emergence of a participative social process against a background of slowly evolving custom. It has been suggested that the "essence of the *polis* as a political community lay in its institutionalization of debate."[44] It could also be suggested that the settlement of the dispute over shares of booty pictured in the *Iliad* was a forerunner of later, more sophisticated negotiations of economic interests and the beginning of the public resolution of disputes which, when institutionalized, became the judicial process. In this light, the sophist tradition represented by Protagoras, with his

subjective, relativist approach to evolving "truth" in public debate, appears to be more of an intellectualization of an old tradition than the cynical nihilism with which he is often charged, about which more will be said in Chapter VI.

Custom and Unwritten Law

Hesiod's account of the Promethean meat division records an essentially technical process or customary procedure for the settlement of two-party disputes. The *Iliad* describes the use of the rhetorical process as a customary method for more general dispute resolution, focusing on procedures for distributions of booty, the awarding of prizes, and the settlement of disputes over blood money. While the procedures for dispute resolution recounted in this early literature mark the beginning of what might be termed "social process," it was the three "unwritten laws," customs sanctified by long use, that served as the major reference base for social conduct throughout the panhellenic world during ancient times. In the beginning, the unwritten laws were primarily enforced by public opinion supported, in some cases, by the formal oath, a not inconsiderable power, in view of E. R. Dodds's contention that "the strongest moral force which Homeric man knows is not fear of god, but respect for public opinion."[45] Ancient Greek literature, from Homer's *Odyssey* to the tragedies of classical times, contains a record of the emerging human comprehension of these social processes, from primitive beginnings in custom to the achievement of a formal legal system in classical times.

In the world of the *Iliad*, "custom was as binding upon the individual as the most rigid statutory law of later days."[46] There were customary ways of dividing booty. It was customary for a council of elders to advise the leader. It was customary for the common people to sit in audience before debates over what course of action should be recommended by the elders to the leader. By custom, it was the leader, Agamemnon, who finally had the right to decide questions regarding the specific venture. The broad framework of custom that guided public debate and the resolution of problems in community life were embedded in the three unwritten laws of ancient Greece: to honor the gods, to honor parents, and to give hospitality to strangers and suppliants. Custom, however, by its very nature, is subject to growth and change when its application is a matter for debate.

In Xenophon's *Memorabilia* (IV.4.19–20), it was argued that the unwritten laws must have been made by gods rather than men and must be universal because men could not have all met together and they do not speak the same language. Since they were made by the gods, he reasoned, violators of them cannot escape punishment. In Sophocles' *Antigone* (454), Creon's absolute

authority as ruler is questioned on the basis of "the immutable unwritten laws." In *Oedipus the King* (865), the chorus refers to the unwritten laws as the "laws ordained from above." The Erinyes or Furies (also called the Eumenides) were in charge of enforcing the unwritten laws, applying the penalties of insanity, famine, sterility, and pestilence. Possibly of Cretan origin, the Furies, reflecting a matriarchal tradition, represented a primeval feminine force and were presumed to have had the power to curtail the fertility of the land. The Furies also enforced the penalties for violation of the oath introduced by Rhadamanthys, lawgiver and one of the three Cretan judges of the underworld.[47] The unwritten laws were used as a frame of reference in debate over public decisions and persisted as prototypes of natural law into the fourth century B.C., contributing an admixture of conservatism and traditionalism to the humanistic ferment of the radical democracy.

Honoring the Gods

The obligation to honor the gods through regular sacrifices and the tithing of booty were the mainstays of temple finance in ancient Greece. The temple, far from serving only private functions, provided the primary structure for the accumulation of public wealth and the organization of many public activities. The dominant role of the temple in the public finance of Athens is illustrated by its use as the treasury for the Athenian empire during the years preceding the Peloponnesian War.[48] The funds collected from the Allies by Athens during this period were placed in a "sacred treasure" in order to insulate them from the common practice of sharing all surplus public revenues with the citizens.[49]

The institution of public oaths was a custom which directly drew its authority from the unwritten law to honor the gods. Its generalization as an institution indicates the way in which religious beliefs can function as an ethical framework for individual relationships when reinforced by public pressure and the desire for respectability. É. Will[50] has suggested that rites developed to handle the individual's relationship with the gods in the temple established techniques which were then adapted for secular purposes when needed. This is probably true of the oath, which represents a commitment to a deity but, as will be developed, emerged as a vehicle for the individualization of relationships and the resolution of secular disputes.

In the account in the twenty-third book of the *Iliad* (346–897) of the funeral games sponsored by Achilles for his friend Patroclus, a dispute arises between Menelaus and Antilochus over the conduct of the latter in a chariot race.[51] Menelaus rises before the assembled Greeks, takes the staff from the

herald, and begins to plead his case over the unfair conduct of his opponent. Then, changing his mind, he announces that he will handle the adjudicating process himself directly with Antilochus and challenges the latter to take a whip in his hand and, in the established way, to make an oath to Poseidon that he had not behaved unfairly in the race. Antilochus is unwilling to take the oath and surrenders the prize to Menelaus.

Menelaus could have chosen trial by combat or arbitration (his initial choice) to settle this dispute, but instead he chose settlement by oath, the third method available in ancient Greece. Each of these is an individualistic, participative process where disputants, standing on similar social footings, work out private disagreements in a public arena. Although dependent on a public process (combat witnessed by others, argument before others, or an oath before others), the settlements were nevertheless private affairs and their satisfaction generally was purely dependent on self-help except for the pressure of public opinion, which was, of course, of considerable importance in the tightly knit Greek community or *polis*. Even in much later times there was no formal community responsibility for the enforcement of judicial decisions, and it was necessary to rely on friends and relatives to help enforce judgments not willingly settled.

The power of the oath in regulating private transactions is illustrated by Herodotus's account (VI.86) of the story of Glaucus the Spartan,[52] who, around the end of the sixth century B.C., was given custody of a large store of wealth by a Milesian who feared for its safety because of the unsettled conditions on the coast of Asia Minor. The Milesian, relying on Glaucus's widespread reputation for integrity, thought to use him as a kind of Swiss banker. Glaucus agreed to surrender the treasure on demand by anyone who presented the matching halves of the tally sticks left with him. But when the sons of the Milesian returned to claim the treasure some years later, Glaucus feigned ignorance of the transaction, hoping to keep the treasure himself. He thought it best, however, to inquire of the oracle at Delphi whether he would be punished if he took an oath denying any obligation to these strangers. He was told by the oracle that asking permission to commit perjury is the same as committing it, and, although Glaucus returned the treasure, Herodotus reported that at the time of writing, three generations later, the complete line of Glaucus's family had died out, a fulfillment of the oracle's prophecy that

> . . . an oath has a son, nameless, without hands or feet,
> But swift to pursue until he has seized and destroyed
> Utterly the race and house of the perjured one.

It was a common practice in ancient Greece for public oaths to be sworn in the temple in the settlement of disputes and in the fixing of value upon goods and services. This is illustrated by Protagoras's explanation of the way he arrived at the fair value of his instruction. "Anyone who comes to learn from me," he said, "may either pay the fee I ask for or, if he prefers, go to a temple, state on oath what he believes to be the worth of my instruction, and deposit that amount" (*Protag.* 328b–c). There are even suggestions that this was still a viable system for handling commercial exchange issues a hundred years later. Aristotle (*N.E.* 1133a1–5), for example, in his discussion of just exchange, alludes to the role of the temple of the Graces in determining "the requital of services," with the implication that the matter falls under the justice of Rhadamanthys, the Cretan god of the underworld in charge of oaths.

In its earliest use in ancient Greece, the oath functioned as a device which utilized the fear of the gods to enforce standards of conduct by calling down divine wrath as retribution for its violation. In later times, it provided an institutional substitute for the trial process and the market system by making possible the resolution of isolated two-party differences in matters of right or value without recourse to these institutions. Solon is credited with instituting the oath as a legal means of denying liability, and the laws of Gortyn permitted its similar use in foreign contracts.[53] The oath came, according to Joseph Plescia,[54] "to constitute the juridical basis of the whole body of customary practices which regulated international conduct" in the Greek world.

Honoring Parents

The unwritten law of honoring one's parents provided the basic sanction and reinforcement for the primary economic and political unit of the archaic Greek world, the self-sufficient *oikos* of the authoritarian, patriarchal family clan with its appurtenant agricultural estate.[55] It also set the pattern of respect for, and obedience to, the authority of a ruler.

The patriarchal head of the extended agrarian household in Homeric times presided over a small, closed, economic world. Here the basic economic goods were produced, aggregated in a central store, and distributed internally among the members of the *oikos*.[56] Little that was needed could not be produced, except for metals, and these were acquired by raiding or, according to Finley, by trade with the Phoenicians, who "sailed from one end of the known world to the other, carrying slaves, metal, jewellery, and fine cloth."[57] Barter was primarily limited to fragmented peasant families exchanging necessities at traditional rates with no profit.[58]

The storeroom where economic goods and treasure were aggregated and

distributed was a central fixture of both the archaic household and of the earlier Mycenaean palace. The small economic world of the *oikos* was in fact a microcosm of the larger economic world of the palace economy. The patriarch directed the productive and distributive activities within his little world, just as the ruler did in the larger palace economy. The word of the patriarch and the word of the ruler were law within their respective spheres. Both drew on the patriarchal authoritarianism of the other, which was reinforced by the basic unwritten law of honoring one's parents. Zeus was father of the gods, the king was father of his people, and the patriarch was father of his extended family. The parallelism even extended to a priestly role for the latter two, the patriarch making sacrifices to specific household gods, while the ruler had similar religious duties in the broader community. The continued dominance four hundred years later of the patriarchal *oikos* in the agrarian economy of fourth and fifth century B.C. Greece, although increasingly limited to the nuclear family, is reflected in the writings of Xenophon and Aristotle. Even today, the cohesion of this family structure is observable in the social and commercial life of Mediterranean families.[59]

The pattern of life in archaic Greece can be pictured as a conglomerate of small, closed worlds. Those who fell into the interstices of this agglomeration through the death of relatives, exile, or other circumstances, lost the vital attachment on which their economic and political security depended. According to George M. Calhoun, all individual rights, including ownership of property, were "conditional upon membership in a family."[60] The obligation to avenge the death of blood relatives gave the members of a strong patriarchal family a sense of security and, even after public intervention gave damage awards for wrongful death, prosecution and collection of damages was still dependent on self-help. The attachment to a patriarchal family was thus a necessity in archaic Greece; those who were unattached to an *oikos* and had to work for hire had neither enforceable legal rights nor economic power. In this sense, their lives were more precarious than that of slaves.

Hospitality to Strangers and Suppliants

The burden to offer hospitality to strangers, including beggars, and to succor and protect suppliants was an obligation whose fulfillment meant status and reputation to the head of every household, even the king, and whose violation might call down the Furies.[61] While the *Iliad* can be characterized as an essay on the law and economics of distribution, the *Odyssey* can be read as a study of the law and economics of hospitality.[62] The abuse of the suitors of the obli-

gation of hospitality, the wasting of the resources of Odysseus's household in his absence by their continued presence, which required constant feasting, is a basic theme of the *Odyssey*. The uncivilized Cyclopes are used to illustrate a lawless culture without social organization and without a sense of the obligation to extend hospitality. Andreades asserts that "hospitality was an obligation of a religious nature, identified in the eyes of the Greeks with civilization, and incumbent upon all, even the poorest."[63] G. Glotz, he notes, "maintains that it was even more than this; that it was in effect a legal institution, constituting a contract between two families."[64]

Zeus's role as both king of the gods and protector of strangers is possibly an echo of a tradition in which primitive nomads and agricultural villagers were under the sway of a distant empire whose authority demanded little of them except annual tribute and the unmolested passage of and basic courtesy to royal emissaries and messengers.[65] In the fragmented political structure of ancient Greece from Homeric times into the classical period, the theme of hospitality is perpetuated in epic and in tragedy, and the patriarch, king, or tyrant who offered hospitality could benefit from a useful aggregation of dependent refugees, fighting men, footloose craftsmen, bards, physicians, and traders.

It is, however, in the "guest-friend" tradition of hospitality that we find the most economically significant aspect of this institution.[66] Finley emphasizes the political importance of the guest-friendship and the symbolic exchange of gifts for cementing contracts between individuals and their families from different communities and states. "The stranger," he writes, "who had a *xenos* (guest friend) in a foreign land—and every other community was foreign soil—had an effective substitute for kinsmen, a protector, representative, an ally. He had a refuge if he were forced to flee his home, a storehouse on which to draw when compelled to travel, and a source of men and arms if drawn into battle."[67] Havelock notes the importance of the guest-friend tradition as the basis for safe conduct and the development of trade in an island society deficient in metals.[68]

There are suggestions that even in warfare the guest-friend relationship took precedence over other obligations. In the *Iliad*, when Diomedes and Glaucus approach each other to engage in individual combat in the open space between the confronting forces of the Greeks and Trojans, Diomedes demands to know Glaucus's lineage, vowing that he will not fight a god. After Glaucus recounts his descent from Bellerophon, Diomedes recalls that his ancestor Oeneus had entertained Bellerophon and that they had exchanged "fair gifts of friendship." Oeneus gave "a belt bright with scarlet, and Bellerophon a double cup of gold." Diomedes then declares, "Therefore now am I a

dear guest-friend to thee in the midst of Argos, and thou to me in Lycia, whenso I journey to the land of that folk." After agreeing to avoid each other in battle, they "leapt down from their chariots and clasped each other's hands and pledged their faith." They then exchanged armor as a symbol of their guest friendship, Diomedes' of bronze and Glaucus's of gold. Homer observes that when the exchange was made, "then did Zeus, son of Cronos, take away his [Glaucus's] wits, seeing he made exchange of armour . . . giving golden for bronze, the worth of an hundred oxen for the worth of nine" (VI.215–41). Homer's critique from the vantage point of a later time suggests that by his day the insistence on reciprocal equivalents in the gift exchange process reflected commercial considerations. The specificity with which Homer refers to the ratio of values is of considerable interest, but it is more likely an indication of institutionalized exchange ratios for metals rather than a consciousness of market values. Both Aristotle and Adam Smith refer to this exchange between Glaucus and Diomedes, Aristotle using it as an example of mutual voluntarism in isolated exchange[69] and Smith as an example of cattle being used as a reference base for value.[70]

In discussing gifts, which are the basis of the guest-friend relationship, Marcel Mauss contended that "the gift necessarily implies the notion of credit" and that, contrary to the prevalent view that exchange evolved from barter to sale to credit, the origin of credit "is to be found in a range of customs neglected by lawyers and economists as uninteresting," namely, the gift. Credit, as an implicit part of the gift exchange, in his view, thus came before barter or sale in the context of a relationship rather than as part of an isolated transaction.[71] A similar institution involving the exchange of services was endorsed by Hesiod (*Works and Days* 345) when he urged the farmer to establish good relations with a neighbor. "Neighbors," he said, "come as they are to help; relatives dress first." He recommended extending a form of credit by giving better measure than one gets in dealing with a neighbor so that "when you need him some other time, you will find him steadfast" (351). The persistence of the neighbor-friend gift relationship described by Hesiod is illustrated by a 1968 study of farmers in Jasper County, Texas. Although it was common in this farming community to engage in cooperative exchanges of field work, "it was viewed as disgraceful, or simply crass, to speak of exchange in monetary terms, or in terms of calibrated reciprocity." The farmers preferred to "view cooperative economic exchange as a spontaneous expression of benevolence, good will, and neighborly assistance." Nevertheless, the researchers noted that evidence of an underlying reciprocity in these exchanges began to accumulate over time.[72]

The expansion of the personal and family basis for the guest-friend relationship to the broader needs of inter-city alliances is illustrated by Herodotus's account (I.69) of the alliance between Sparta and Lydia in the mid-sixth century when the formalities of gift exchange and guest-friend oaths were used to cement a treaty between the two cities. The institution is a prototype for the social compact in which mutual, rational self-interest on the part of individuals outside the umbrella of any protective or stabilizing political structure provides a basis for reliance and trust. Too little is known about the ancient guest-friend relationship and of the religious and political sanctions that may have supported the sense of trust that led men to embrace the institution with the zeal demonstrated by Glaucus and Diomedes when they met on the battlefield before Troy, but we do know that the institution survives in the form of family contacts in the Mediterranean world. A strong tradition of hospitality must have still existed in the thirteenth century that permitted travelers such as Marco Polo to make their way successfully from Venice to China and back again without mishap.

The Public Process and Two-Party Disputes

The fabric of life in ancient Greece was vastly different from our own. One fundamental difference was that no distinction or separation was then made between the economic, political, and legal aspects of life. Moreover, most economic activities—production, consumption, distribution, and the like—took place within the extended family structure and, as a result, never gave rise to any identifiable transactions. Within the small, closed worlds of the extended households, decisions were made by authoritarian patriarchs and were not the result of formal transactions between the *individual* members of the *oikos*. At this stage, individuals had not yet been separated as units from the clan or family group.[73] Thus, only when issues arose concerning members of *different* households were there likely to have been negotiations or disputes that would have elicited descriptive comment or required a system of resolution beyond the administrative authority of the patriarchs.

One such issue gave rise to the convention that disputes over homicides involving members of different households should be settled by payment of a blood price rather than by the earlier custom of vengeance. This practice undoubtedly arose from the desire of a ruling authority or a community and/or the rational self-interest of the leaders of different households to curtail the interminable bloodshed and anarchy inherent in the duty of vengeance by the kin group of a slain victim.

There was portrayed on Achilles' shield, said to have been made by Hephaestus, the blacksmith of the gods, a trial scene following a homicide. This trial scene is described in great detail in the *Iliad* (XVIII.497 ff.):

> But the folk were gathered in the place of assembly; for there a strife had arisen, and two men were striving about the blood-price of a man slain; the one avowed that he had paid all, declaring his cause to the people, but the other refused to accept aught; and each was fain to win the issue on the word of the daysman [umpire]. Moreover, the folk were cheering both, shewing favour to this side and to that. And heralds held back the folk, and the elders were sitting upon polished stones in the sacred circle, holding in their hands the staves of the loud-voiced heralds. Therewith then would they spring up and give judgment, each in turn. And in the midst lay two talents of gold, to be given to him whoso among them should utter the most righteous judgment.

There is no disagreement that the scene on Achilles' shield represents the culmination of a negotiation over one of the major subjects of economic transactions between extended households in archaic Greek culture, the settlement of a blood price for the death of a kinsman. Nor is there disagreement that the negotiation pictured is between two litigants contending before an umpire, a council of elders, and a public assembly. In preliterate societies, public proceedings are indispensable if the legal process is to have continuity and perform its secondary function of informing the public of the standards of countenanced behavior. The phrase, "In the midst lay the two talents of gold" is a tantalizingly elusive but dramatic image of the economic aspects of the scene.

The ambiguities in the description of the trial process and the difficulties of translating it have given rise to many conflicting interpretations.[74] It is not clear, for example, whether the two talents represent the blood price being offered by one party and being refused by the other as inadequate; whether or not it is being contended that the blood price had already been paid and receipt is being denied by the other party; whether the two talents represent a fee put up by the litigants as compensation to the court or arbitrator;[75] and whether the reference to "judgments" being given refers to arguments of the litigants or pronouncements by the judges, each vying for the right to claim the two talents for having stated the most "righteous" decision.

Our primary interest in this representation of archaic life in ancient Greece is in the active, participative process depicted. Havelock infers, consistent with his translation, that "the litigants received the staff alternately from the elders before speaking." In his translation, the litigants "rushed up to [the

elders] and alternately argued the justice of it."[76] There is no dominant magistrate presiding who would draw on the elders for advice, although the role of the umpire (Havelock's "knower") is ambiguous. Homer's description of the populace "cheering both, shewing favour to this side and to that" and of heralds holding back the crowds suggests anything but passivity. This was not a crowd waiting quietly for a pronouncement from a higher authority.

While it is possible that, at some archaic period, argument was before a circle of elders who then stated their opinions to be voted on by an assembly of citizens, with a fee being paid to the winning elder (the one uttering the "most righteous judgment"), as some have interpreted the scene on Achilles' shield, no historical survivals of such a system are ever cited. With such a procedure, a voting system would have been required permitting the assembly to vote for a specific elder, and the rhetorical competition between the elders would have obscured that between the litigants. Moreover, in such a system several elders would presumably argue for the winning side, vying for the fee. There would thus be no way for a jury to vote for an absolute verdict (yes or no on the amount claimed) by dropping pebbles into an urn in the conventional way.[77]

The presumption that the two talents on public display were a proffered blood price[78] is not inconsistent with the procedure recommended by Odysseus in the dispute between Achilles and Agamemnon over booty, where the public display of the proffered gifts was part of the settlement process. Odysseus, acting as go-between, says, "And, as touching the gifts, let Agamemnon, king of men, bring them forth into the midst of the place of gathering, that all the Achaeans may behold them with their eyes" (XIX.152–78).

Although Sir Henry Maine, along with many others, thought the two talents represented a payment of some kind to a judge or arbitrator, he primarily emphasized the procedural significance of the scene on the shield. Discussing a manuscript of the Roman jurist Gaius, discovered only in 1816, Maine noted that "the ceremony described by Gaius as the imperative course of proceeding in a *Legis Actio* is substantially the same with one of the two subjects which the God Hephaestus is described by Homer as moulding into the First Compartment of the Shield of Achilles." Both the scene on Achilles' shield and the *Legis Actio Sacramenti*, which he calls "the undoubted parent of all the Roman Actions, and consequently of most of the civil remedies now in use in the world," demonstrate the legal principle of words before action discussed above—"demand before action" as Maine expresses it—"on which all civilized systems of law insist."[79]

Havelock construes the scene on Achilles' shield as a rhetorical contest between the two litigants and thinks that the two talents were to be awarded to the speaker, i.e., the litigant, who most persuasively argued his own case.

What is most significant about Havelock's interpretation, however, is his conclusion: "This kind of justice is not a set of preexistent principles or a set of rulings imposed by judges in the light of such principles. It is a symbol or a *process* achieved through oral persuasion and oral conviction."[80]

The confrontation between two parties resulting in an equilibrium or balance is a recurring vignette in Homer's writings. He compares the indecisive Trojan attack on the Greek fortifications to "two men with measuring-rods in hand striv(ing) about the landmark-stones in a common field, and in a narrow space contend(ing) each for his equal share." Similarly, the equilibrium of the stalemated action is likened to "a careful woman that laboureth with her hands at spinning, [who] holdeth the balance and raiseth the weight and the wool in either scale, making them equal" (*Il.* 411–38).[81] Although modern economic theory generally associates equilibria with market transactions, there is no suggestion that Homer's frequent allusions to equilibrated results of two-party actions were derived from a market rather than a legal context. Even in the illustration of the woman using a balance to weigh wool, all that is indicated is that the careful weighing of commodities according to established standards was part of the popular culture of Homer's time. Such care in weighing is perfectly consistent with barter or with sale where the exchange values of commodities are fixed, not by a market, but by convention or as deductions from administrative ratios used in tax collections or distributions.[82] Wool in particular is a commodity that is not amenable to measurement by volumetric standards. Even though petty trade may have occurred in the agora, at this early time it could hardly have exercised a regulatory influence on production and consumption, as would have been the case with a fully developed market process.[83]

The Public Interest in the Resolution of Disputes

In his *Eumenides*, Aeschylus uses the legend of the accursed House of Atreus to develop the theme of the equilibrium achieved in the working out of contending claims before a public forum as the solution to the endless cycle of bloodletting engendered by the archaic system of vengeance.[84] Presented in 458 B.C., the tragedy, the third in the trilogy the *Oresteia*, resolves the dilemma resulting from the unwritten laws when Orestes, in fulfillment of his obligation to avenge his father's death at his mother's hand, violates the unwritten law of honoring parents by killing his mother. Under the system of vengeance, a tenuous public order had been maintained by the threat of retributive private murder. Aeschylus's play dramatically portrays an equi-

librium at a higher level, of a social or public resolution of conflict for the public good to replace the barbarism of individual controversy. It is a forceful explanation of why a crime must be treated as an offense against the entire community and not simply as an injury to the victim and his family.[85] The theme of Aeschylus's play is that justice is a social phenomenon and can be insured only by a social process, a court of law, and not by any individual effort, even by a just ruler.[86] His view is in sharp contrast with Plato's conception of a static, preexisting imprint of justice discernible by only a few philosophers, an outlook which leaves no room for any collective process. By dealing with this subject in the form of a tragedy to be performed before large audiences, Aeschylus utilized as formal a medium as the culture provided for the jurisprudential treatment of this problem.

Soon after his return from the Trojan War, Agamemnon is murdered by his embittered wife, Clytaemestra, in retribution for his having sacrificed their daughter to secure favorable weather for the passage to Troy. This act is another link in a chain of vengeful retributions that have cursed the House of Atreus for generations. Orestes, Agamemnon's son, then assumes the moral burden of avenging the murder of his father and kills his mother, Clytaemestra. Racked by the dilemma of having honored one unwritten law by avenging his father but, in so doing, violating another by killing his mother, Orestes is reinforced, even encouraged, by Apollo, who represents the patriarchal male tradition. The Furies, representing the matriarchal tradition and the female fertility principle, relentlessly pursue Orestes, seeking vengeance for the violation of the unwritten law of honoring parents. They are in charge of distributing "due portions" or "fate" to mankind. Orestes flees to Delphi and receives absolution from Apollo, who claims to speak for his father, Zeus. When the chorus asks,

> Then, Zeus, as you say, authorized the oracle
> to this Orestes, stating he could wreak the death
> of his father on his mother, and it would have no force?
> (622–24)

Apollo, representing the administrative tradition, contends that the killing of Clytaemestra is a matter of protecting ordained authority rather than simply a violation of an unwritten law:

> It is not the same thing for a man of blood to die
> honored with the king's staff given by the hand of god.
> (625–26)

While Apollo can offer Orestes protection as a suppliant at Delphi, he cannot stop the Furies from hounding him. He tells Orestes to go to Athens and, as a suppliant before Athene's statue,

> Kneel there, and clasp the ancient idol in your arms,
> and there we shall find those who will judge this case.
> (80–81)

Finding Orestes at Athene's statue, the Furies scream,

> . . . you must pay for the pain of the murdered mother,
> each with the pain upon him that his crime deserves.
> Hades is great, Hades calls men to reckoning.
> (268, 273–74)

The impasse between the two conflicting legal traditions has been clearly drawn. Orestes, quite reasonably, seeks relief since he is supported by one authority but relentlessly driven by fiends. The Furies make the charge, "He murdered his mother by deliberate choice" (425) and denounce Orestes, saying, "He is unwilling to give or to accept an oath" (429). After hearing the Furies' charges, Athene asserts, "Here are two sides, and only half the argument" (428). She insists upon proper form or process, saying, "You wish to be called righteous rather than act right" (430). And, apparently in reference to the use of oaths, she adds, "I say, wrong must not win by technicalities" (432).

To carry out the formal trial procedure upon which she insists, Athene selects twelve jurors to pass judgment on the case. Emphasizing the importance of short arguments, she permits the parties to state their cases. The Furies claim that blood was spilled within the kin group, a parent dishonored willfully, and they argue the general principle that if this crime goes unpunished, parents cannot rest comfortably in their beds for fear of their children. Apollo, speaking for Orestes, affirms that, through his oracle at Delphi and speaking for his father, Zeus, he sanctioned Orestes' duty to avenge his father's murder. He denies that a child is a blood relative of his mother. She, he says, is only the bearer of her husband's seed, pointing to Athene (who supposedly sprung directly from Zeus's head) to support the argument that a mother is not necessary for generation.

In what is essentially the presiding judge's instruction to the jury (680–710), Athene reminds the jurors of their duties. Calling on the citizens to take the responsibility to rule without abandoning the threat of punishment (the force of law), she decries both anarchy and dictatorial authority:

No anarchy, no rule of a single master. Thus
I advise my citizens to govern and to grace,
and not to cast fear utterly from your city. What
man who fears nothing at all is ever righteous?
(696–99)

This is the issue with which Plato took specific issue in the discussion of whether justice pays, discussed in Chapter IV.

When the jury is evenly divided in its verdict, Athene casts the tie-breaking vote for Orestes on the grounds that he was authorized by constituted authority to punish a crime that required punishment and, further, that he lacked consanguinity with his mother and thus did not violate the prohibition against internecine violence. With this public resolution of the charges against Orestes, the cycle of private vengeance is broken. For all time to come, the form or process of justice will bring order to the community. Aeschylus's play is a literary rationalization of the founding of the Areopagus, the homicide court of Athens, of the triumph of a public or social process for the determination of individual responsibility over vengeance and clan warfare.

In the *Eumenides* Aeschylus carries the tradition of two-party confrontations between individuals or interests with equal status to a new level by using the institutionalization of a social process to establish a public interest in the resolution of issues. The resolution of the tension between opposing interests in the play creates a social "truth" with an integrity that transcends individual efforts to resolve conflicts.

At the same time, there is ambivalence in Aeschylus's play. A hung jury necessitates the intervention of a higher authority, a goddess, who ultimately makes the decision.[87] Is this a symbolic argument that group decision-making processes merely equilibrate opposing points of view so that divine or natural inspiration must ultimately govern? When Athene, with her obvious patriarchal bias, casts the deciding vote, one wonders whether this is a subtle revival of the tradition of absolute authority as the true source of effective decision making. There remains a mixed tradition, but at a level where the social or public process supersedes both isolated two-party transactions and arbitrary, individual authority.

The trial scene on Achilles' shield and Aeschylus's account of Orestes' trial give us glimpses into the shadowy beginnings of the ascendancy of a *public* or *social* process over the hegemony of clan and family. In the course of this change, the individual was emancipated from the larger kin group for the first time. And with consciousness of the individual as a separate social unit came recognition of individual responsibility to the community, a responsibility

mirrored in public oaths to the gods. The promissory oath, which Maine thought to be the crucial tie between the status stage and the contract stage of society, may have originated in these earlier oaths, often cast in the form of contracts between individuals and the gods.[88]

"The history of Greek institutions," Plescia writes, "fell approximately into three periods: in the first, the community was composed of clan-families which jealously guarded their internal sovereignty and subordinated all their members to their own common good; in the second, the clan-families surrendered their internal sovereignty to the community and the *polis* thus was born; in the third, the individuals asserted their moral freedom before the *polis*, which thus lost its all-pervading nature and in practice came to control only the political aspect of society." He adds that it was "the introduction of money and the new sources of revenue, based on trade and commerce, [which] started the process of emancipation of the individual."[89]

This emancipation was a necessary step in the movement away from a concept of duty to one's superiors to a concept of duty to one's peers and, reciprocally, enforceable *rights* against one's peers. The satisfaction of such claims requires an impartial process for adjudicating disagreements, which implies equality before the law. Only with the development of individual moral responsibility, Plescia notes, was it possible for the concept of contract [and thus law] to emerge. Only then was it that "mankind . . . reached social maturity; its law became now primarily a law of obligation derived from the agreements of the individuals."[90] Contracts, which were only belatedly extended to commercial exchange, are affirmative agreements between individuals about interests in shares enforceable by law (or public process). They ultimately institutionalized the tradition of rational free choice illustrated by the Promethean transaction. Such voluntary distributions and/or commitments, when protected by a legal framework, free the process of distribution from the warfare inherent in isolated transactions. The market process later served a similar function by replacing individual estimates and considerations with a market or social estimate. In this sense, it was the social process which emancipated the individual. Man is a social animal which, as Marx observed, "can develop into an individual only in society."[91]

VI Utilitarian Measurement in the Public Process

But in that field I am speaking of—in right and wrong and matters of religion—people are ready to affirm that none of these things is natural, with a reality of its own, but rather that the public decision becomes true at the moment when it is made and remains true so long as the decision stands.
—Protagoras in Plato's *Theaetetus* (172a–b)

The beginnings of social process glimpsed in the Homeric epics and explicitly portrayed in Aeschylus's trilogy had by the democratic period in Athens become the subject of interested discussion and debate. The social and legal theory developed in these discussions has never ceased to influence western European thought since the ancients argued about issues which are still the focus of modern controversies. An analysis of the discussions between Protagoras and Socrates in the Platonic dialogues gives us access to the rootstocks of ideas supporting both the participative and administrative traditions. Protagoras defended the idea of a social consensus arrived at through public process, while Plato was committed to an absolutist, moral perspective arrived at by pure reason. In Protagoras's subjectivist view, decision making for a community should be a collective public process to which individual participants contribute, while decision making in Socrates' (Plato's) moral or absolutist view is an administrative function to be performed only by outstanding individuals trained for leadership. Protagoras's view depicts an equilibrium of the tension between administrative and participative elements, for he thought the right to participate in the decision-making process requires the reciprocal obligation to accept social decisions once they are made.

The public assemblies in ancient Greece where the citizens gathered to exchange opinions and to arrive at social consensus served, in effect, as an ancient prototype of the market, and Protagoras's opinion that the participative deliberative process produces collective decisions superior to those arrived at by individuals separately is similar to the assumption of some economists that the market process has a cumulative sagacity above and beyond the perceptions of individual market participants. His conception of the role of the orator and of the wise leader of a democracy as one of explaining to the populace the elements of a utilitarian calculus for use in collective decision making is

an embryonic expression of the utilitarian calculus upon which modern economic theory is based. Moreover, the adversary system in the law courts, for whose contending parties Protagoras's pupils wrote arguments, was a prototype for bargaining in exchange and price-forming processes. Although the ideas examined in this chapter are framed largely in political and legal contexts, they anticipate two of the most basic elements of modern economic theory: (1) the function of the market in utility maximization through its role as the efficient allocator of resources; and (2) the use of utilitarian or hedonic measurement in the evaluation of choice. Moreover, Protagoras's man-measure doctrine is the parent idea of both the labor theory of value and the notion of subjective individualism.

Because of the prominence of the Platonic dialogues in European education, they have exerted a continuous influence on the mainstream of Western economic, legal, and political theory as much through the suppressed undercurrent of Protagorean ideas as through the more dominant Socratic views presented by Plato. Their reexamination provides a foundation for analyzing modern controversies between an individualistic as opposed to a more comprehensive social measure of human relations. It should be kept in mind that only a few fragments of Protagoras's writings have survived and that we know of his ideas primarily through the reports of his opponents. Bertrand Russell remarked, "When one thinks what would become of any modern philosopher if he were only known through the polemics of his rivals, one can see how admirable the pre-Socratics must have been, since even through the mist of malice spread by their enemies they still appear great."[1] In order to develop the elements of this ancient debate, it will be useful to examine Protagoras's myth about the origin of human society, which, as J. S. Morrison observed, reflected widely held views of his time.[2]

Protagoras's Myth

Although Protagoras's ideas are reported by a bitter antagonist in the Platonic dialogues, his insistence on a social rather than an individual moral view is clear. The famous Protagorean myth of the origins of human society illustrates his main ideas.[3] According to the myth (*Protag.* 320c–323a), the distribution of necessary powers in the animal kingdom is made by Epimetheus, with authority delegated by the gods, "balancing one against another" to achieve an ordered equilibrium so that "no species should be wiped out." Some are given swiftness, some large size, some weapons, and some the ability to live underground. "Some he made to prey on other creatures for their food. These he made less prolific, but to those on whom they preyed he gave a

large increase, as a means of preserving the species." Each animal was thus given the technical means of livelihood and defense sufficient, not only unto itself, but also to maintain the stable order of the animal kingdom as a whole in a planned, self-equilibrating ecology.[4]

As the myth unfolds, however, it becomes clear that the technical skill and the use of fire belatedly given to man as his "powers" will not be sufficient for his stable functioning in the established ecological framework since this technology provides him only with sustenance but not protection from the wild beasts, nor from others of his own species when, for protection, men try to live together in cities. To stabilize man's deteriorating position in the ecological balance, two additional "powers" are given. Hermes is sent by Zeus to bring "conscience (*aidos*) and justice (*dike*) to mankind, to be the principles of organization of cities and the bonds of friendship."[5]

But of what use could respect for others and a sense of justice be in averting the destruction of mankind which Zeus feared? According to the myth, these last "powers" were sent to enable mankind to live in cities. Man, it seemed, needed his own subsidiary ecosystem or microcosm within the Protagorean ecology—a city, a society—in order to survive in his defenseless state among the stronger animals and to live harmoniously with his own kind without self-destructive conflicts.[6] The social attributes of respect for others and a sense of justice, the myth suggests, are as necessary to man's survival as the physical endowments of the rest of the animal kingdom are to theirs.[7]

Protagoras's myth is not simply an anecdote or a folktale. Using traditional elements, he constructed a new myth which he used for instructional purposes to illustrate a finely tuned general equilibrium system in which human beings are dependent on their own social arrangements to effect their survival within the general ecological balance of the world. In Protagoras's account of the origin of society, the technology given to man by the gods makes economic production possible, but the political art, it seems, is equally necessary. Only with both technology and the political arts does man at last have the capacity to operate a political economy.

The famous "hymn to man" in Sophocles' *Antigone* (330–80) is an eloquent paraphrase of Protagoras's myth. It lauds the genius of man in applying the technology and political arts conferred on him by Zeus:

> Many the wonders but nothing walks stranger than man.
> This thing crosses the sea in the winter's storm,
> making his path through the roaring waves.
> And she, the greatest of gods, the earth—
> ageless she is, and unwearied—he wears her away

as the ploughs go up and down from year to year
and his mules turn up the soil.

Gay nations of birds he snares and leads,
wild beast tribes and the salty brood of the sea, with
the twisted mesh of his nets, this clever man.
He controls with craft the beasts of the open air,
walkers on hills. The horse with his shaggy mane
he holds and harnesses, yoked about the neck,
and the strong bull of the mountain.

Language, and thought like the wind
and the feelings that make the town,
he has taught himself, and shelter against the cold,
refuge from rain. He can always help himself.
He faces no future helpless. There's only death
that he cannot find an escape from. He has contrived refuge
from illnesses once beyond all cure.

Clever beyond all dreams
the inventive craft that he has
which may drive him one time or another to well or ill.
When he honors the laws of the land and the gods' sworn right
high indeed is his city; but stateless the man
who dares to dwell with dishonor. Not by my fire,
never to share my thoughts, who does these things.

Victor Ehrenberg believes that Sophocles used Protagoras's myth in praise of man "to turn praise into warning. Man is shown in his complete independence, both when he conquers nature and when he follows his own laws. From it results his greatness as well as his doom. The poet's intention in singing of man's achievements and his ultimate nothingness is not to debate certain sophistic theories and topics but to stress the urgent need of law, tradition, and religion, their relevance to the life of the individual as well as of the community, and the tragic impact of their neglect."[8]

If in fact the hymn represents Protagorean ideas, it is clear that Protagoras's main contention was that man can teach himself what is necessary for his survival as long as he continues to maintain community ties. Further, Protagoras thought every man has the potential capacity to contribute to the political process, for "everyone must possess [a sense of justice] to some extent or other, or else not be among men at all" (*Protag.* 323b–c). This is not to assert that all are equally endowed with political capacity, but only that all have sufficient

endowment to justify their participation in community life, and that this capacity can be improved by instruction.[9] George Grote observed that "without a certain minimum of this sentiment in each individual bosom, even the worst constituted society could not hold together. And it is this sentiment of reciprocity which Protagoras postulates in his declaration, that justice and the sense of shame . . . must be distributed universally and without exception among all the members of a community."[10]

In Protagoras's myth, when Hermes is preparing to distribute Zeus's gifts to man, he asks, "Shall I distribute these in the same way as the practical crafts? These are distributed thus: one doctor is sufficient for many laymen, and so with the other experts. Shall I give justice and conscience to men in that way too, or distribute them to all?" Zeus's reply is, "To all . . . and let all share in them; for cities could not come into being, if only a few shared in them as in the other crafts. And lay down on my authority a law that he who cannot share in conscience and justice is to be killed as a plague on the city" (322c–d).

Protagoras's commitment to democratic rule is in clear contrast with Plato's commitment to rule by the expert, developed in Chapter IV. Whether the political art (civic virtue), which Protagoras claimed to teach, can, in fact, be taught or whether it is, like the arts, innate in only a few, is one of the main points of difference between Protagoras and Socrates, and the first part of the *Protagoras* is taken up with this question.[11] Protagoras's stated aim is to demonstrate that the Athenians "think that it [a sense of justice] does not come by nature or by luck, but that it can be taught, and that everyone who has it has it from deliberate choice" (323c),[12] and he concludes his argument with "It seems to me . . . that I have now adequately shown that your fellow citizens are right to accept the advice of smiths and cobblers on political matters, and also that they regard excellence as something that can be taught and handed on" (324d).[13] The fuller implications of Protagoras's assertion that civic virtue (the political art) can be taught "to all by all"[14] and his theory of social process are developed in the *Theaetetus*.

Man as the Measure

Protagoras's famous doctrine, recounted in the *Theaetetus*, that "man is the measure of all things—alike of the being of things that are and of the nonbeing of things that are not" (152a),[15] has led some to call him "the first humanist." Plato develops this Protagorean view[16] in primarily physical terms, emphasizing that any given thing "is to me such as it appears to me, and is to you such as it appears to you" (152a).[17] But Protagoras's view of subjective perception is not a purely passive phenomenon. There is, in a sense, a dialectic

between the person and the objects of his perception so that "what we say 'is' this or that color will be neither the eye which encounters the motion nor the motion which is encountered, but something which has arisen between the two and is peculiar to each several percipient" (154a).[18]

This dialectic between the percipient and the physical sense object, consistent with the then accepted physiological assumption that vision involves an emanation of light from the eye, suggests a dynamic context in terms of which to view the Protagorean notion of the role of the individual in the *polis*.[19] At 166c, Protagoras is reported as saying, "we have . . . each one of us, his peculiar perceptions . . . [and] what appears to each becomes . . . for him alone to whom it appears." At 169c, we read that though "every individual [is] self-sufficient in wisdom . . . some people [are] superior in the matter of what is better or worse."

In Protagoras's view, the *polis* was an aggregation of such self-sufficient opinions, a functioning unit like the self-compensating animal ecology of his myth. It had, however, a relativistic base so that,

> whatever any state makes up its mind to enact as lawful for itself, really is lawful for it, and in this field no individual or state is wiser than another. But where it is a question of laying down what is for its advantage, once more there, if anywhere, the theory [which] will admit a difference between two advisers or between the decisions of two different states in respect of truth, would hardly venture to assert that any enactment which a state supposes to be for its advantage will quite certainly be so.
>
> But in that field I am speaking of—in right and wrong and matters of religion—people are ready to affirm that none of these things is natural, with a reality of its own, but rather that the public decision becomes true at the moment when it is made and remains true so long as the decision stands." (172a–b)[20]

Protagoras's relativistic appraisal of law is understandable in the context of a multiplicity of small city-states with a wide range of laws, customs, and institutions.[21] A century and a half earlier, Solon had expressed the same outlook when asked whether he thought the laws of the Athenians were the best. He is reported to have answered, "No, but they do have laws that suit them best."[22] The cultural relativism of fifth-century B.C. Greece is reflected in a variety of sources. Herodotus's account (III.36–40) of Darius's demonstration that burial practices are a matter of varying custom and not universal law is one example. Summoning before him both Greeks and Indians, he elicited descriptions from each group of its burial customs. The Greeks, who burned their dead, were horrified that anyone would eat them. The Indians, on the

other hand, who ceremonially ate the dead bodies of their parents, were aghast that anyone would burn them. Herodotus wryly remarks, "If anyone, no matter who, were given the opportunity of choosing from amongst all the nations in the world the set of beliefs which he thought best, he would inevitably, after careful consideration of their relative merits, choose that of his own country. Everyone without exception believes his own native customs, and the religion he was brought up in, to be the best; and that being so, it is unlikely that anyone but a madman would mock at such things." This incident is recounted after Herodotus's statement that Cambyses' failure to respect the burial customs of the Egyptians was a proof of his madness.[23]

Xenophanes exhibited a similar cultural relativism when he wrote that "if oxen (and horses) and lions had hands or could draw with hands and create works of art like those made by men, horses would draw pictures of gods like horses, and oxen of gods like oxen, and they would make the bodies (of their gods) in accordance with the form that each species itself possesses."[24] The scientific thought of Democritus, who made a distinction between material existence and perception, may have been directly influenced by this relativistic tradition. "Things," he wrote, "are [deemed] sweet and bitter, hot and cold, and have colour by conventional rule; in reality they are atoms and void."[25] Whatever the meaning of Democritus's statement, it is not inconsistent with Protagoras's assumption that a realm of social perception exists that is fundamentally arbitrary and subject to determination by convention or consensus,[26] a view basically unacceptable to Plato, whose concept of absolute truth approachable only by pure reason could not accommodate subjective relativism except as an expression of popular error, an attitude illustrated by his parable of the cave in Book VII of the *Republic*.

In his dialogues, Plato took it for granted that there is only one state or political economy worth instituting—the ideal state administered by experts. There was thus no treatment in his writings of value criteria for deciding *what kind* of state or political economy to establish. He dealt only with efficiency in the implementation of the "best" one, which was ultimately dependent on the ethical motivations of experts. Protagoras, on the other hand, assumed that "no individual or state [is] wiser than any other" in deciding on the ends of the state so that whatever kind of state or political economy a majority wished to have would be as good as any other.

Moreover, his relativism extended to a religious agnosticism. "About the gods," he commented in one of his surviving fragments, "I am not able to know whether they exist or do not exist, nor what they are like in form; for the factors preventing knowledge are many: the obscurity of the subject, and the shortness of human life."[27] This attitude has led some to identify him with

other sophists and amoralists, such as Callicles, whose relativistic teachings were alleged to have corrupted the Athenian youth. Aristophanes' *Clouds* parodies Socrates as the most conspicuous of these sophists, teaching devious ways of winning lawsuits and of cheating creditors. Although Finley is prepared to lump Protagoras with other sophists whose cynical relativism was attractive to elements hostile to the democracy in the late fifth century B.C., this is too facile a judgment.[28] Protagoras's own career as a teacher and as a confidant of Pericles, the leader of the classical Athenian democracy, is evidence of his commitment to the participative democratic process during a period of changing economic and social alignments.

Protagoras's relativism, however, presented certain problems. "If," Vinogradoff asks, "there is no standard of objective truth—if, in other words, every man is his own standard of truth, how can any means be found for men to join together and to live harmoniously in cities and states?" Protagoras's solution, he concludes, "amounts to this: with regard to truth in the abstract, nobody can speak with absolute certainty, and therefore no city can say that its laws are better than those of any other. But while this is undeniable, there is another definite standard which can be ascertained, namely that of utility. . . . [Protagoras's] position, reduced to its simplest elements, is that truth cannot be discovered, but utility can."[29]

Although Plato clearly presents Protagoras's relativistic ideas, he is less clear about how Protagoras viewed the role of "advisers" or experts. We may infer, however, from his reference to a difference between "two advisers" as to "advantage" that here Protagoras thought it no longer a question of one man's opinion being as good as any other—which he thought the case in *deciding* on objectives in the first place—but a matter of the utility or efficiency of alternative courses of action or means in achieving an objective or end once it had been decided upon.

The difference between Plato's and Protagoras's views can be clarified by reference to the "ship of state" image used so often by Plato[30] to demonstrate the desirability of submitting to the administration of the expert. The captain, the expert, was viewed by Plato as the only person capable of being entrusted with the responsibility of getting the ship to its destination; allowing anyone else to share in the task would be folly. But Finley put his finger on an important aspect of the matter, the absence of any treatment of value criteria in Plato's reliance on the use of expertise in achieving an objective: "When I charter a vessel or buy passage on one," Finley writes, "I leave it to the captain, the expert, to navigate it—but *I* decide where I want to go, not the captain."[31] Plato takes it for granted that there is only one place to go, i.e., the destination determined by the authoritarian philosopher.

Protagoras, however, assumed that the "destination" or goal (or general welfare or happiness) of a society was a matter to be decided by the citizens themselves by reaching a public consensus. The question of which "ends" were chosen was not of primary concern to him. The problem of deciding "means," that is, the most advantageous or efficient method of achieving given *ends*, was another matter. In this sphere of debate, the expert (the orator, the wise leader of a democracy) could participate as adviser, convincing the populace of the advantage or utility of specific courses of action. He thus saw the proper role of the leader or expert as one, not of deciding ends but of offering rational advice and persuasion[32] in the determination of ways and means. He recognized that the success of such policies would be dependent upon the participative acceptance by the citizens of the expert's recommendations. There is thus a kind of mutual interdependence in a democracy: the citizens need the advice and guidance of a wise leader, and the leader cannot effect efficient solutions to problems without the participative support of the public.

Vlastos catches the dialectic of this interdependence when he explains the two meanings of *isonomia*, the name which preceded democracy as the term for popular government. The "junction of equality and law," he writes, "may be read not only in the sense of law as the guarantee of equality, but also in the converse sense of equality as the guarantee of law. In the former sense . . . law appears as the means to the end of political equality; in the latter, law, or the rule of law, is the end, political equality is the means to the end."[33] Pericles clearly had the interdependence between the leader and his constituents in mind when he spoke of successful public actions in a democracy being dependent on prior debate (Thuc. II.40).

Protagoras: The Social Measure

It is clear from his classic statement of subjectivism, "man is the measure," and the other passages cited from the *Theaetetus* that Protagoras's main political theory emphasized the concept of the *polis* as a body in which the law-forming process is characterized by a participative mutuality between citizens with different opinions.[34] As noted by D. Loenen,[35] Protagoras rejected the isolated individual as a source of justice.[36] Instead, his reliance was on the citizen's role in the social process itself, hence his interest in teaching the "management of public affairs, how to make the most effective contribution to the affairs of the city both by word and action" (*Protag.* 319a). This implicit rationalization of the democratic process, with its leadership role for well-educated individuals such as Pericles, was called by Morrison Protagoras's

"doctrine of the led democracy,"[37] and it was precisely this aspect of Protagoras's thought that Plato found repugnant and systematically avoided developing in either the *Protagoras* or the *Theaetetus.*

James Bonar apparently was not aware of Protagoras's principle that an aggregation of individual opinions makes for a social opinion superior to individual views. He attributed this idea to Aristotle, observing that he "seems to have been the first to formulate clearly the doctrine that the multitude have a collective wisdom not possessed by the individuals separately."[38] J. S. Morrison, however, correctly noted that Protagoras regarded law as "the mass-mind of the body politic" and "superhuman in the sense that it is an entity greater than the sum of its human parts."[39] The later conceptualization of the economy as a separate element of the political and social structure perpetuated this Protagorean view in its attribution to the market of an uncanny wisdom in accommodating and equilibrating the varied interests of individual participants.

Although the argument is not well developed in the *Theaetetus*, it is clear from the efficiency or utilitarian criterion of "virtue" (goodness or *arete*), elaborated in the *Protagoras* and discussed in Chapters II and IV, that Protagoras was prepared to apply rational principles to the determination of more or less efficient levels of conduct for the achievement of given ends. Indeed, this is precisely what he claimed (*Protag.* 319a) to teach: success in managing the affairs of household and city. As noted by A. T. Cole,[40] the orator's task, in Protagoras's view, "is to examine the institutions of a given city in the light of a utilitarian calculus and to persuade his audience to accept new practices as right and honorable whenever he finds that existing ones do not serve the city's best interests." Protagoras's was a value-free, rational, utilitarian approach to effectiveness in achieving stated objectives.

R. I. Winton and Peter Garnsey place the issue of the teachability of "virtue" or the utilitarian calculus in its wider political context. "When the *demos*," they write, "began to claim a right to full citizenship, the traditional, elitist ideology of political competence became problematic: assumptions became issues. The issue whether *arete*, the ability required for successful participation in running the *polis*, could be taught, as opposed to its being inherited, and if so, how, and to what extent, was at the heart of fifth-century political argument."[41]

A. E. Taylor confuses Protagoras's offer to teach a *skill* for use in a *process* (the management of personal and civic affairs) with an offer to teach the *objectives* of the process, true knowledge of the optimum state of affairs. "What Protagoras really means by 'goodness,'" he writes, is "just the medley of uncriticized traditions which Socrates calls in the *Phaedo* 'popular goodness' and

opposes to 'philosophic goodness,' as the imitation of reality."[42] By thus defining virtue or goodness as the *objective* of the community (whatever a state decides is lawful) instead of as a skill to be used in a *process* for most efficiently achieving such an objective, Taylor is led to the conclusion that what Protagoras claimed to teach was not substantive knowledge and therefore could not be taught.[43]

Protagoras's offer to teach "virtue" as an efficient personal and civic skill was not a commitment to teach the "right" ends; he offered only to teach rationally valid distinctions between better and worse means of achieving publicly accepted ends already determined.[44] The distinction appears to have been influential in later political and legal thought, although it is somewhat blurred in other fifth-century B.C. expressions, such as the *Suppliant* plays written by Aeschylus and Euripides. These plays, which are thought to express Protagorean ideas, primarily emphasize the leadership role of the king in molding public opinion to gain support for an end. There is in these plays, however, a recognition that it is public support and public volition that makes a state strong and effective, that the strength of the city is in the sense of participation generated by the leader. The two aspects—of efficient process and freely chosen ends—flow together, with the viability of the ends tied to the participative process.

In Euripides' *Suppliant Women* (428–29), the importance of the participative process to the creative growth of the democratic community is clearly stated:

> . . . Nothing
> Is worse for a city than an absolute ruler.
> In earliest days, before the laws are common,
> One man has power and makes the law his own: Equality
> is not yet. With written laws,
> People of small resources and the rich
> Both have the same recourse to justice
>
> . . . .
>
> This is the call of freedom:
> "What man has good advice to give the city,
> And wishes to make it known?" He who responds
> Gains glory; the reluctant hold their peace.
> For the city, what can be more fair than that?
> Again, when the people is master in the land,
> It welcomes youthful townsmen as its subjects;
> But when one man is king, he finds this hateful,

And if he thinks that any of the nobles
Are wise, he fears for his despotic power
And kills them. How can a city become strong
If someone takes away, cuts off new ventures
Like ears of corn[45] in a spring field?

Pericles also stressed the importance of public participation when, in his funeral oration, he asserted that the Athenian laws "secure equal justice for all in . . . private disputes, and our public opinion welcomes and honours talent in every branch of achievement, not for any sectional reason but on grounds of excellence alone."[46]

Euripides' emphasis on the stability which results from "written laws" in encouraging popular initiative and enterprise is a Protagorean perspective which was also reflected in Demosthenes' speech against Dionysodoros (LVI. 48). The case dealt with a sea captain who had contracted to deliver a cargo of Egyptian grain to Athens but who, instead, put in at Rhodes in bad weather and sold the cargo there, causing a loss to his creditor investors. "Do not disregard the fact that now, while you are deciding a single case," Demosthenes argued, "you are legislating for the whole of the market, and that numbers of those whose business is by sea are standing here awaiting your decision. If you maintain the validity of these contracts and agreements, and show no mercy to those who break them, the moneylenders will be more ready to make advances, and your trade will be stimulated." Demosthenes thus extended the recognition of the importance of predictability in the legal system to the maintenance of a stable economy. In discussing this case, Vinogradoff[47] takes note of the fact that Greek courts were not bound by precedent and calls attention to Demosthenes' argument for the treatment of individual decisions in terms of the wider context of economic policy.

It will be remembered that the sense of justice and respect for others given by Zeus to man in Protagoras's myth were identified as the "necessary powers" (arts or skills)—the technology, in other words—for "running a city" to assure man's survival and to overcome the destructive forces of individualism. The culmination of this process is law, which, according to Protagoras, cannot be measured by an absolute standard (it has "a reality of its own") but only by the collective nature of the process (a "state makes up its mind"). It is an outgrowth of a process involving the citizen's participation and respect for others' rights and views—Grote's "sentiment of reciprocity."[48] Viewed as a social dialectic, good laws and the resolution of specific controversies are approached by a public discourse aided by wise leadership. The elements of this social dialectic are a multiplicity of mutually respected opinions. Protagoras's doc-

trine recognized that the strength of the *polis* lay in the social process of developing political and economic stability with justice and respect for the interests of all the participants.[49] It may be suggested that the Protagorean emphasis on applying *dike* and *aidos* to the decision-making process as a means of achieving political stability has parallels with our modern legal concept of due process of law in that it sets up the procedure or process itself as the measure of justice.[50]

The consistency with which Protagoras applied the social measure to the objectives of the legal process is illustrated by his attitude toward punishment. "Someone who aims to punish in a rational way," he says, "doesn't chastise on account of the past misdeed—for that wouldn't undo what is already done—but for the sake of the future, so that neither the wrongdoer himself, nor anyone else who sees him punished, will do wrong again" (*Protag.* 324b).[51] When, in discussing the corrective social objectives of punishment, Protagoras asserted that "justice calls men to account" (*Protag.* 326e),[52] he was probably referring to the institution discussed in Chapter I which required officials at the end of their term of office to make an accounting, another example of justice as a product of a collective process.

The social subjectivism inherent in the process of the development of the laws of the *polis* based on "advice from anyone," without which Protagoras believed "there can be no city at all" (*Protag.* 323a), entailed a requirement of popular participation as a prerequisite of political stability[53] and a political agnosticism unacceptable to Plato. "Social subjectivism" is here meant to convey the perspective of a society or community having the capacity to think of itself and to act collectively as a functioning social and political entity without reference to any universal standards. Its law "becomes true at the moment when it is made and remains true so long as the decision stands" (*Theaet.* 172b). The individual's close identification with the group in such a society is a residue of the traditions of extended family, clan, and tribe. The Greek *polis* had an identity of this kind, and that is why exile was such a serious penalty.[54]

Many examples may be cited from Greek literature illustrating the idea of justice as implicit in a social form or collective process, frequently institutionalized as a formal procedure, for popular participation or decision making. Court trials, public referenda, public accountability of officials, and even the communal village tradition are examples of such collective processes. The incident in the *Iliad* (I.211) when Achilles starts to draw his sword in an assembly and is restrained by Athene telling him to abuse with words rather than his sword suggests, as mentioned in Chapter V, a very ancient tradition of institutionalized public debate, frequently reinforced by the display of a ceremonial staff or scepter as a symbol of authority.

When, in Aeschylus' *Eumenides*, Orestes is directed to go to Athens to stand trial and receive a public judgment, the public deliberative process is recognized as superior to the endless sequence of private burdens of retribution for inherited family grievances and, in this case, the hopeless individual dilemma of the obligation to avenge one's father versus the obligation to honor one's mother. This development, according to J.-P. Vernant,[55] is reflected in the semantic evolution of the ancient Greek word *authentes*, for a murderer.

In the *Suppliant Maidens* (397–99), when faced with conflicting claims for justice, Aeschylus has the king say:

> The choice is not easy: choose me not as judge.
> I said before that never would I act
> Alone, apart from the people, though I am ruler.

And later he proclaims (962–64):

> Myself and all
> the citizens protect you, whose voted will
> is now fulfilled.

Euripides in *The Medea* (124) has the nursemaid laud the stability of temper engendered by the necessity of common people "to live on equal terms with one's neighbors," as opposed to the erratic flights of passion to which members of the aristocracy were prone, a comment on democratic interaction producing even-tempered citizens.

Although couched in terms of the administrative tradition in Xenophon's writings, the distinction made by Cyrus's father between "compulsory obedience" and "willing obedience," discussed in Chapter III, corresponds to the Protagorean idea of wise leadership persuading (not forcing) the populace to accept better counsel.[56]

Protagoras's view of justice was conceived in essentially social terms in which social order and process were understood to be their own justification. In this relativistic sense, the participative society is its own measure of justice: the legal process itself is the essence of justice.[57] Protagoras thus assimilated the individual into a social measure of the law. This perspective was also extended to judicial and economic processes,[58] where the adversary system was developed as a framework for working out the conflicting interests of individuals and providing a stable setting for political and economic participation.

Socrates: The Private Moral Measure

Plato's (or the historical Socrates') attitude toward political and legal processes was very different from that of Protagoras. In the *Apology* (31c–e), which is presented as a report of Socrates' defense at his trial for impiety, there is a repudiation of any faith in the capacity of the democratic political process to achieve justice: "It may seem curious that I should . . . never venture publicly to address you as a whole and advise on matters of state. . . . No man on earth who conscientiously opposes either you or any other organized democracy, and flatly prevents a great many wrongs and illegalities from taking place in the state to which he belongs, can possibly escape with his life." And further, "The true champion of justice, if he intends to survive even for a short time, must necessarily confine himself to private life and leave politics alone" (32a).

Socrates' defense indicates that his attitude toward discourse was primarily a personal (rather than a social) approach to problem solving, with justice conceived as a specific end rather than a process. He saw his own role in discourse as a participant in *private* discussions for the purpose of arriving at *individual* views of justice. He pictures himself as having "busied myself all the time on your behalf, going like a father or an elder brother to see each one of you privately" (31b). And, as a justification of his non-participation in public life, he explains, "I set myself to do you individually in private what I hold to be the greatest possible service" (36c). Callicles rather unkindly referred to this evasion of public discourse as "whispering with three or four boys" in a corner (*Gorg.* 485d).

In other writings, Plato's concern was with "the expert . . . the one authority, who represents the actual truth" (*Crito* 48a), and he was incensed at the unconcern of the "bulk of the populace" for the "judgment of [their] betters in the assurance which comes of a reckless excess of liberty" (*Laws* 700c, 701b). He was interested in the "superior" wisdom of the "outstanding" individual who could enunciate the "best" law.

What is significant in these passages for our purposes is his insistence, both in tone and argument, on the impervious prerogative and the moral and intellectual integrity of the self-appointed individual leader, from whose vantage point the public process is viewed with contempt.[59] Socrates says in the *Gorgias* (474a–b): "I know how to produce one witness to the truth of what I say, the man with whom I am debating, but the others I ignore. I know how to secure one man's vote, but with the many I will not even enter into discussion." And in the *Laches* (184e): "A good decision is based on knowledge and not on numbers." Although it may be contended that Socrates in these passages is merely questioning the effectiveness of communicating with too large

a crowd, his position is clear, that only a limited few are capable of being reasoned with.

The type of elitist individualism espoused by Plato had the effect of separating the citizen from his traditional sense of participation in the *polis* and provided a rationalization for substituting private moral judgments for the consensus of democratic process.[60] As noted by Vlastos, Plato held "that a man whose personal wisdom and virtue meet the high standards of philosophic perfection, *should* be entrusted with absolute, irresponsible power, and that his personal integrity, armed with sufficient resources of persuasion and compulsion, could and would establish the perfectly just state."[61] This stance was very congenial to a justification of the Hellenic elite's growing sense of alienation from the democratically controlled *polis*.

F. M. Cornford observed that the individual subjectivism of the man/measure principle was "precisely the Protagorean element adopted by Plato."[62] He was not, however, prepared to subject the individual judgments of leaders to the judgment of the "multitude" to determine their validity. He insisted that only by "right reason" could individual opinions be refined as approximations of ultimate "truth." The only *social* process he envisioned was a personal dialectic between a teacher and a prize pupil, not between a leader and the "multitude."

Although Socrates lauds the argumentative process as a means of approaching truth in the *Gorgias* and other dialogues, the mature Plato in the *Theaetetus* (172c–173a) scathingly denies the efficacy of formally structured argumentation in the law courts. The adversary system in the courts he termed "an apprenticeship in slavery." Witness his acerbic portrait of the lawyer:

> The orator is always talking against time, hurried on by his clock; there is no space to enlarge upon any subject he chooses, but the adversary stands over him ready to recite a schedule of the points to which he must confine himself. He is a slave disputing about a fellow slave before a master sitting in judgment with some definite plea in his hand, and the issue is never indifferent . . . he acquires a tense and bitter shrewdness . . . his mind is narrow and crooked.[63]

Although critical of the time limitation in the law court, Socrates' own argumentative style was oriented toward short exchanges. In the *Protagoras*, he pressures his opponent for shorter answers to his questions. One can only guess what process Socrates would have substituted for public due process in the law courts, considering that his description of the adversary system in the *Theaetetus* sounds very much like the school from which he learned his own elenctic style. It is hard to find a fruitful basis for speculation on his specific

political ideas through the filter of Plato's dialogues since they contain only abstract expositions of intellectual and moral positions completely removed from practical political issues and controversies of the day. It is even harder, however, to imagine that Socrates was sentenced to death merely for the role attributed to him in Plato's dialogues.

If one hypothesizes that Socrates' main problem was the congeniality of his individualistic moral assertiveness with the need of the alienated elite to justify a sense of righteous indignation with the policies of ancient Greek democracy, the picture becomes clearer. If Socrates did in fact take political or moral positions extreme enough to support a death sentence, all traces of them have been expunged from the record, or, by inference, we are to believe that the Athenian democracy had degenerated into a capricious mob, condemning old men to death for being embarrassing adversaries in verbal encounters in public places.

A discussion reported by Xenophon (*Mem.* I.2.40–46) to have taken place between Alcibiades and Pericles[64] suggests a plausible argument which might have been used in the fifth century B.C. to bolster the moral position of the upper classes against the democratic majority. We may even take Alcibiades and Pericles as surrogates for Socrates and Protagoras in this discussion, which is replete with the irony so characteristic of Plato's Socrates.

> "Tell me, Pericles," [Alcibiades] said, "can you teach me what law is?"
>
> "Certainly," he replied. . . . "Laws are all the rules approved and enacted by the majority in assembly, whereby they declare what ought and what ought not to be done."
>
> "Do they suppose it is right to do good or evil?"
>
> "Good, of course, young man,—not evil."
>
> "But if, as happens under an oligarchy, not the majority, but a minority meet and enact rules of conduct, what are these?"
>
> "Whatever the sovereign power in the State, after deliberation, enacts and directs to be done is known as a law."
>
> "If, then, a despot, being the sovereign power, enacts what the citizens are to do, are his orders also a law?"
>
> "Yes, whatever a despot as ruler enacts is also known as law."
>
> "But force, the negation of law, what is that, Pericles? Is it not the action of the stronger when he constrains the weaker to do whatever he chooses, not by persuasion, but by force?"
>
> "That is my opinion."
>
> "Then whatever a despot by enactment constrains the citizens to do without persuasion, is the negation of law?"

"I think so: and I withdraw my answer that whatever a despot enacts without persuasion is a law."

"And when the minority passes enactments, not by persuading the majority, but through using its power, are we to call that force or not?"

"Everything, I think, that men constrain others to do 'without persuasion,' whether by enactment or not, is not law, but force."

"It follows then, that whatever the assembled majority, through using its power over the owners of property, enacts without persuasion is not law, but force?"

"Alcibiades," said Pericles, "at your age, I may tell you, we, too, were very clever at this sort of thing. For the puzzles we thought about and exercised our wits on were just such as you seem to think about now."

"Ah, Pericles," cried Alcibiades, "if only I had known you intimately when you were at your cleverest in these things."

The chain of substitution in the discussion has taken us through the following sequence: (1) majority decision; (2) decision by constituted authority (whether of the majority or minority); (3) despotic authority; (4) distinction between force and persuasion; (5) decree without persuasion is negation of law; (6) whatever a minority does by force is not law; (7) enactments by the majority over the propertied classes (the minority) without their consent is not lawful. This discussion was apparently intended to demonstrate that the principle of participative persuasion should result in a veto power in the hands of the propertied minority over enactments by the majority, an argument against democratic rule.[65]

The ambivalence of the Protagorean view, which included both the idea of majority rule and the obligation of the outstanding individual to contribute his leadership through persuasion, left the way open for the argument that the majority should not dominate the minority without the minority's consent. The Alcibiades/Pericles dialogue shows that the minority of fifth-century B.C. Greece could construct such moral arguments to repudiate its obligation to the law under the traditional view of the *polis*. Protagoras's proffered training of young men from leading families to prepare them to serve as wise leaders and his doctrine of the "led democracy" may have had little appeal to many who were losing their prerogatives and were groping for an ethical and moral justification of their eroding individualistic roles and privileges.

Although Plato apparently lost interest in the individualistic moral basis for questioning public authority as he built his authoritarian philosophy of the state, the libertarian perspective attributed to the historic Socrates in the Platonic dialogues has been congenial to a wide spectrum of Western political

thought. In fact, most subsequent political debate has been a dialectic between elements of Protagorean and Socratic positions.

Werner W. Jaeger[66] wrote of the fifth century B.C., "The whole age was moving toward individualism, and [the sophists] were in the van of the movement." The sophists, however, stressed individual participation in a social process, while Plato argued for an ethical individualism which provided a pedestal from which to criticize democratic procedures. The establishment of the Athenian democracy had diluted the inherited monopoly of power and prestige hitherto enjoyed by the leading families. The sophist subjectivist interpretation of the relation of individuals to society and their participation in the democratic process as citizens of a *polis*, rather than as members of a clan or tribe, was a basic element in breaking the monopoly on heroic individualism. The idea that the social order could be conceived as an aggregation of discrete units like atoms or digits in the arithmetic system required a theory of how such subjectively independent, self-defining entities could be aggregated into social wholes. The democratic institutions of courts and assemblies provided the mechanism for this aggregative and consensual process, and in them the sophists reached their zenith of influence, while Plato continued his attack on democratic notions of social process through his advocacy of an individualistic and moral approach to civic problems.

The Aristotelian Synthesis: Marginal Utility in the Comparison of Efficient Means

The theory which emerged from the sophists' arguments about social consensus arrived at through public process was taken up by Aristotle in his *Topics* and *Rhetoric* and molded into a treatment of the decision-making process in the public assembly. In these works, the elements of choice appropriate to public decision making are analyzed and specific utilitarian comparisons made between alternatives in a context which emphasizes the importance of economic factors. We may therefore treat Aristotle's rhetorical writings as the most authoritative summary we have of Protagorean utilitarian measurement in the public process.

Aristotle matured in a century dominated by sophist thought, and we see in his writings both Platonic and sophistic perspectives.[67] In the *Topics*, an early treatise on the principles of discourse, Aristotle articulates the Platonic tradition when he discusses argument in an essentially private context unrelated to a public purpose, but this work also reflects a well-established sophistic tradition of training students for participation in public two-party confrontations, such as occur in the law courts and the public forum, in which each must

refute the particular view held by an opponent.[68] His interest in the analytic potential of utilitarian comparisons, developed in the *Topics*, led him in the *Rhetoric* to depart from his earlier Platonic aloofness to public discourse and to launch a systematic examination of the elements of choice appropriate to public decision making. The *Rhetoric* thus served as a vehicle for carrying the Protagorean utilitarian calculus into relatively modern times. Rhetoric, as one of the seven liberal arts of medieval education, was one of the direct connections between ancient Greek and modern Western thought.

Aristotle begins the *Topics* by suggesting (101a25) the reasons for becoming adept in argumentation ("intellectual training, casual encounters, and the philosophical sciences"), and he reviews a variety of hedonistic comparisons to be used to convince an opponent that one choice is preferable to another. The approach is very specific, with the intent of demonstrating that a careful, systematic analysis of hedonic comparisons will convince an opponent of the superiority of one choice over another. Moreover, value is stated in terms of incremental comparisons.[69] He observes (118b15), for example, that "a thing is more desirable if, when added to a lesser good, it makes the whole a greater good."[70] And he adds, "Likewise, also, you should judge by means of subtraction: for the thing upon whose subtraction the remainder is a lesser good may be taken to be a greater good, whichever it be whose subtraction makes the remainder a lesser good." By implication, when the value of the whole exceeds the sum of the separate values of its component parts, the excess must be attributed to the addition of one or the other of the constituent goods. He illustrates the point (118b10–15) with the example of "a saw and a sickle in combination with the art of carpentry: for in the combination the saw is a more desirable thing, but it is not a more desirable thing without qualification."

Interestingly, Aristotle makes an allusion (118b20–25) to conspicuous consumption, a Veblenian concept, as an argument to convince an opponent of the propriety of a given choice. "A thing," he writes, "is defined as being desired for the look of it if, supposing no one knew of it, you would not care to have it. Also it is more desirable if it be desirable both for itself and for the look of it, while the other thing is desirable on the one ground alone."[71]

In Emil Kauder's opinion, Aristotle carried a concept of subjective utility into a discriminating analysis of marginal increments.[72] However, it is clear from the *Topics* that systematic value comparisons based on subjective marginal utility were used by Aristotle in a way completely unrelated to price theory. The marginal analysis is there, but the utilitarian calculus is applied only to the analysis of argument.

In his mature years Aristotle was finally able to cast off the Platonic mantle and, in the *Rhetoric*, he organized and systematically presented the accumu-

lated sophistic material on the art of public speaking. Here argument is no longer regarded as an essentially private discourse. In this work, Aristotle embraces the sophistic approach to public life, and oratory is classified (1358b1–15) into three categories: political, forensic, and ceremonial. These three divisions, he says, refer to three different kinds of time and to three different ends. The political orator is "concerned with the future . . . about things to be done hereafter." His aim is to establish "the expediency or the harmfulness of a proposed course of action" by arguing that it is either "good" or that its alternative "will do harm." The forensic orator is "concerned with the past," and he discourses about "things already done." His aim is to establish "the justice or injustice of some action." The ceremonial speaker, on the other hand, is "concerned with the present," although he may "often find it useful also to recall the past and to make guesses at the future." His aim is to prove that the person about whom he is speaking is either "worthy of honour or the reverse."

Contrary to current usage, where rhetoric sometimes has the connotation of exaggeration or bombast, it is clear that Aristotle used the term in its older sense as "the study of the composition and delivery of persuasive speeches," a form of analysis to be employed in convincing decision-makers about the utility of different choices. He points out that analytical distinctions must be made between universal and particular propositions, between absolutes (the great and the small) and relatives (the greater and the lesser), and that the rhetorician must be able to "offer counsel" on "matters about which people deliberate; matters, namely, that ultimately depend on ourselves, and which we have it in our power to set going" (1359a35). He lists (1359b20) the "usual subjects of public business" about which legislative bodies deliberate as "ways and means, war and peace, national defence, imports and exports, and legislation." This view is not very different from Adam Smith's conception of political economy as a branch of jurisprudence. In public decision making, Aristotle says, "all men in common aim at a certain end which determines what they choose and what they avoid . . . the happiness of . . . constituents" (1360b5). One of his definitions of happiness (1360b15) is "the secure enjoyment of the maximum of pleasure."

Although Aristotle examines various elements of the "happiness" which is the "common aim" of decision making, it is clear that he follows Plato's premise that the "good" society is not a matter of dispute. This leaves him free to follow the Protagorean or general democratic tradition at the deliberative level where the orator's task is seen as giving advice about the *means* of achieving happiness. He makes it clear (1362a17–20) that "the political or deliberative orator's aim is utility: deliberation seeks to determine, not ends, but the means *to* ends, i.e. what it is most useful to do." Thus, in a debate about "ways and

means," the speaker "will need to know the number and extent of the country's sources of revenue, so that, if any is being overlooked, it may be added, and, if any is defective, it may be increased. Further, he should know all the expenditures of the country, in order that, if any part of it is superfluous, it may be abolished, or if any is too large, it may be reduced." Aristotle here adds significantly, "For men become richer not only by increasing their existing wealth but also by reducing their expenditure" (1359b20–25). He makes it clear that he considers advising about "ways and means" to be a specific field of expertise in which the comparative method may profitably be used when he remarks (1359b25–30) that a "comprehensive view of these questions cannot be gained solely from experience in home affairs; in order to advise on such matters a man must be keenly interested in the methods worked out in other lands."

By thus assigning to the rhetorician the role of practical analyst who breaks down the elements of problems in order to clarify the choices that must be made to maximize efficiency, Aristotle clearly establishes that he views the objectives of rhetoric as constructively analytic rather than as merely propagandistic. Cogency and success in persuasion, he makes clear, are enhanced when the political orator bases his argument upon a sound dissection of the elements of a problem and the careful hedonic comparison of the choices involved. We can see in this formulation an anticipation of the claim of some modern economists that economics can become a value-free technical art which focuses only upon means and not ends, that is, upon the efficiency or usefulness of alternative choices in achieving given ends. This view of the discipline is epitomized in Lionel Robbins's famous definition of economics as a "science" which analyzes "human behavior as a relationship between given ends and scarce means which have alternative uses." The rhetorical tradition has been used to justify a value-free art for the practicing lawyer arguing a client's case without himself making a value judgment about the larger issues of justice involved, but economists have had more difficulty in keeping a clear distinction between "ways and means" and the ultimate ends of economic decisions, particularly at the macroeconomic level.

In his development of the elements of efficient choice (1363b5–1365b23), Aristotle repeats most of the hedonic comparisons formulated in the Protagorean utilitarian calculus as well as those of the *Topics*. Although he sometimes blurs the distinction between the utility of means and the "good" end and introduces "honor" as a "measure of value," he generally adheres to lines of argument which, from different points of view, appraise value in terms of utility. Furthermore, he takes account of scarcity and use value when he observes (1364a20–25) that "what is rare is a greater good than what is plentiful.

Thus gold is a better thing than iron, though less useful: it is harder to get, and therefore better worth getting." A few lines further on, he, in effect, alludes to what is known as the water/diamonds paradox in modern economic theory when, after stating that "what is often useful surpasses what is seldom useful," he quotes Pindar's line (*Olympian* 1 [1]) that "the best of things is water."[73]

He gropes toward a sense of productivity and process when he discusses vested labor as a measure of value. "That also is good," he writes, "on which much labour or money has been spent," and he adds that "the mere fact of this makes it seem good, and such a good is assumed to be an end—an end reached through a long chain of means" (1363a1–5). He illustrates this point with lines from the *Iliad* (II.160) where it is protested that the Greeks cannot abandon the apparently fruitless siege of Troy and return empty handed because they have already spent so much time on the venture.

Aristotle's truly striking analytic insight comes, however, when he applies the concept of process to his definition of wealth and points out (1361a20) that "wealth as a whole consists in using things rather than in owning them; it is really the activity—that is, the use—of property that constitutes wealth." Despite the assertion by some that the ancient Greeks had no concept of productivity, this observation, as well as the passages from Xenophon discussed in Chapter III, provide clear evidence that the Greeks did in fact have such a concept and that their view of wealth was not limited to accumulated assets.

Aristotle's acceptance here of a dynamic or process definition of wealth and his emphasis upon the economic aspects (the "ways and means") of maximizing public wealth make it clear that the sense of participative process and the dialectics of debate had been carried from their earlier specifically political frame of reference into a broader setting that can be accepted as political economy. The major difference between this view of the politico-economic process and the theory of political economy that emerged in the eighteenth century is in the anthropocentrism of the former and the concept of natural law embedded in the latter. It was Aristotle's study of rhetoric that led him to a sympathetic treatment of the sophistic view of public life and discourse[74] and to the use of marginal utility in the comparison of efficient means. We shall see that these ideas influenced his analysis of two-party exchange in the *Nicomachean Ethics* and his analysis in the *Politics* of the economic base of the *polis*.

VII Aristotle and Two-Party Exchange

Virtue, wisdom, sagacity, prudence, success, imply different schemes of values, but they all submit to the law formulated by Aristotle with reference to virtue, and analysed by modern writers with reference to business, for they all consist in combining factors χατ' ὀρθὸν λόγον, in the right proportion, as fixed by that distribution of resources which establishes the equilibrium of their differential significances in securing the object contemplated, whether that object be tranquillity of mind, the indulgence of an overmastering passion or affection, the command of things and services in the circle of exchange, or a combination of all these, or of any other conceivable factors of life.

—Philip H. Wicksteed[1]

As Plato's most prominent pupil in the Academy, Aristotle emerged as a major synthesizer of classical Greek thought, systematizing knowledge in fields as diverse as biology, rhetoric, astronomy, metaphysics, and ethics. It was this aspect of his work that led Arabic scholars to use his writings as textbooks for formal instruction[2] and, eventually, resulted in the emergence of Aristotelianism as a dominant influence in medieval Europe. Five modern disciplines bear the titles of Aristotelian writings: economics, physics, metaphysics, ethics, and politics. The work on economics is, however, now considered pseudo-Aristotelian and has only minimal theoretical content. His *Nicomachean Ethics* and *Politics* will thus receive the most attention here.

Aristotle's *Nicomachean Ethics* and its commentary literature served as the standard texts for medieval courses in moral philosophy,[3] and the scholastic writings which emerged from these courses provided the basis for theoretical reflections on economic issues into the Enlightenment. Even in Adam Smith's day, moral philosophy still contributed the premises for what emerged as political economy, evidenced by the fact that Smith was a professor of moral philosophy, not political economy, and that the subject of his inaugural lecture for his chair in logic and metaphysics at the University of Glasgow was Plato's theory of the Ideas, not some aspect of economic theory. Few economists today, however, are any longer aware of the fact that political economy grew out of a moral philosophy based on ancient Greek writings or of the dependence of the founders of their discipline on ancient and medieval predecessors. "It is easy now to forget," Odd Langholm remarks, "that those who laid the foundation of modern economics in the eighteenth century were as familiar with the accumulated knowledge of scholastic analysis as the average twentieth-century economist is ignorant of it."[4]

Although he did not assimilate the Protagorean tradition of participative

process in its full democratic vitality, elements of participative analysis do appear in Aristotle's work. One of the most important such passages for the economic and legal analysis of exchange, and the one that has had the most far-reaching influence on subsequent thought, is his treatment of justice in exchange in Book V (1133a–1134a) of the *Nicomachean Ethics*, an analysis of a two-party transaction that puzzles and intrigues scholars to this day. Nearly every leading scholastic thinker wrote his own commentary on the passage during the first three centuries after Europe's emergence from the Dark Ages,[5] and modern classical scholars still argue over its interpretation. The famous passage on justice in exchange is an extension of Aristotle's proportionate analysis of particular justice in distributions and corrective remedies. The Greeks applied various proportions (arithmetic, geometric, and harmonic) to their analyses, and, like subsequent theorists who have sought to make their work more "scientific" by the use of mathematical formulations, Aristotle used proportions to "mathematicize" his discussion of justice in various contexts. However, because the text of the passage on justice in exchange is so sketchy and problematical, there has been wide disagreement about which kind of proportion is intended in the exchange passage.

Aristotle's analysis of exchange has not received much attention from modern economists. Marx pointed out that Aristotle recognized in this passage in the *Ethics* that commensurability is essential to a theory of exchange but that, without a social theory of value, he could not analyze the market process.[6] Joseph A. Schumpeter, one of the few modern economists to attempt an explanation of the passage, concluded that Aristotle did not have a theory of market price. He contended that, in the analysis of exchange, Aristotle used a geometric proportion, "groping for some labor-cost theory of price which he was unable to state explicitly." Schumpeter, however, seemed to betray a lack of confidence in his own interpretation when, with apparent annoyance, he added, "At least, I cannot get any other sense out of this passage."[7] Paradoxically, although he found in Aristotle's writings the beginnings of formal analytic technique applied to economic subjects, he dismissed him generally as a dispenser of "pompous common sense."[8]

Unfortunately, Schumpeter's interpretation of the exchange passage in the *Ethics* has been followed by some classicists, most notably by M. I. Finley, who, although confessing that he, too, does not understand the ratios in Aristotle's two-party exchange formulation, asserts flatly that "In the *Ethics* . . . there is strictly speaking *no* economic analysis rather than poor or inadequate analysis."[9] Generally approaching the exchange passage in the *Ethics* with little background in economic or jurisprudential theory, classicists have frequently failed to distinguish between an analysis appropriate to isolated ex-

change and one appropriate to a market process. Moreover, as pointed out by Theodore J. Tracy, the Greek term signifying the *middle* or *middle ground* in general is ambiguous and must be translated differently in varying contexts, a fact which has not helped classicists interpret Aristotle's discussion of justice in exchange since it is framed in terms of mean and proportion.[10] It is therefore not surprising that the existence of the third or harmonic proportion, crucial to an understanding of Aristotle's analysis of exchange, has not been appreciated by many translators and commentators, despite D. G. Ritchie's 1896 article which called attention to a catallactic or barter theory of justice analyzed by a third proportion in Aristotle's *Ethics*.[11] The distinction made by economists between isolated exchange and market exchange and the various proportions used by the Greeks will be considered in more detail below.

Economic historians and economic anthropologists have also given attention to the passage on exchange in Aristotle's *Ethics*, primarily because they have been interested in determining whether the ancient Greek economy had any parallels with modern ones and also whether or not modern economic theory has application to ancient and primitive conditions. The current "formalist/substantivist" controversy in economic anthropology is a debate about the appropriateness of applying modern economic theory to ancient and primitive economies.[12] It was preceded, in the late 1800s, by a dispute among economic historians (modernists/primitivists) over the nature of the ancient economy and whether or not it had any modern characteristics.[13] Karl Polanyi, a major contributor to the "substantivist" position whose status interpretation of the exchange passage in the *Ethics* has been followed by some economic anthropologists and classicists, painted a dramatic picture of Aristotle standing at the threshold between an earlier economic system and the modern market system which emerged some two thousand years later,[14] but, in the end, Polanyi could not separate economic analysis from price analysis and concluded that economic theory could not benefit from Aristotle's treatment of barter and exchange. However, in later years Polanyi drew on Carl Menger's *Grundsätze* for a broader definition of economic analysis which comprehended the "substantive" or "embedded" aspects of the economy.[15]

Of the legal scholars who have given attention to Aristotle's *Ethics*, Paul Vinogradoff is perhaps the most important.[16] In his view, Aristotle's analysis of fairness in exchange is an extension of his discussion of corrective justice. Vinogradoff points out that the exchange formulation should be seen in the context of the dynamic interaction between litigants which was at the heart of the Athenian legal process. It tends to be forgotten that litigants in Athens first appeared before arbitrators (private or public) empowered to discuss and to decide on the proper amount due in settlement of claims. Only when

such arbitration attempts failed were disputes heard in Athenian courts. Mediation by arbitration would, of course, require a theoretical basis for arriving at a fair settlement in two-party disputes since, as observed by Aristotle (*Rhet.* 1374b20), "an arbitrator goes by the equity of a case," which, by its nature, is more flexible than the application of a rule of law. By contrast, if an issue was appealed to a court from the decree of the arbitrators, the decision that could be made by the jurors (judges) could not be discretionary, but was limited by law to a choice between the two amounts claimed by the litigants or between the amount claimed by the appellant and that awarded by the arbitrators.[17] This decision had to be reached without discussion. It will be argued in this chapter that Aristotle's analysis of exchange in the *Ethics* was an attempt to determine the criteria for fairness from the point of view of the Athenian legal process, whether in arbitration or the courts, and that it was not an explanation of market forces.

Added to the difficulties mentioned above, the interpretation of Book V of the *Ethics* has been made no easier by the condition of the surviving manuscripts. Some consider Book V to be the most corrupt of all the books,[18] and J. A. Stewart went so far as to assert that "the Fifth Book . . . would gain in perspicuity if half of it were rejected."[19] Moreover, commentators from scholastic times to the present have often approached the material with specific theoretical agendas which have tended to reinforce preconceptions of what Aristotle meant.

Contract as Planning in Isolated Exchange

It is important to examine the broader frame of reference in terms of which Aristotle approached justice in exchange before dissecting the analytical elements of his discussion. First, let us recall from Chapter III that the principle of mutual reciprocal benefits from exchange had been advanced by Xenophon in his description of the contract or treaty engineered by Cyrus between the Armenians and the Chaldeans. In this administratively structured contract, a pastoral people agreed to lease their unused cropland to an agricultural people who, in turn, agreed to lease their unused pastureland to the pastoralists. This agreement thus permitted the exchange of two "goods," each subjectively valued as worthless by the respective owners but, after the exchange, subjectively valued as a considerable gain by the recipients. Even the administrative authority (Cyrus) benefited from the arrangement: in return for bringing order and mutual benefit (justice) to these people, he could expect to draw tribute from part of the surplus benefits to support his rule, at the same time leaving both peoples better off. Xenophon's account treats the transac-

tion between the Armenians and the Chaldeans as an administratively structured arrangement or contract for mutual benefit. In Aristotle's view, just exchange is a similar kind of arrangement[20] where anticipated mutual advantage draws exchanging parties together and creates a pool of additional benefits. However, he conceived of it as an independent, two-party negotiative process rather than an administrative one. He seemed to think of contract as a particularized expression of the legislative and deliberative process in a nonmarket context.

If Aristotle's analysis of two-party exchange in Book V of the *Ethics* is approached from the perspective he developed in the *Rhetoric*, it will be seen that, in this particular passage of the *Ethics* in which he deduces the exchange transaction from principles of universal and particular justice,[21] his intention was not to explain a market process. Instead, the discussion of exchange is from a judicial point of view, retrospectively evaluating the fairness of particular transactions in isolated exchange. His chain of reasoning in the *Rhetoric* (1373b–1376b10), repeated in the *Ethics* (1129a–1131a), is as follows. Universal law deals with the principles of natural justice, particular law with details that must be worked out in the deliberative or legislative process and applied by jurymen or arbitrators with reason and equity. In the *Rhetoric*, he explains that one phase of particular justice, the deliberative phase, deals with future problems, while a second phase, the judicial, resolves disputes over past actions. He defines contract (1376b5–10) as "law, though of a special and limited kind" and emphasizes that "while contracts do not of course make the law binding, the law does make any lawful contract binding, and . . . the law itself as a whole is a sort of contract, so that any one who disregards or repudiates any contract is repudiating the law itself."

Following this line of analysis and the definition of contract in the *Rhetoric*, we see that Aristotle approached isolated exchange as a two-party expression of the deliberative process whereby individuals structure particular arrangements between themselves for future mutual benefit in areas that are too specialized and/or personal to be the subject of general legislative attention. These arrangements could be given legal force through judicial recognition, although the preferred medium in ancient Greece was apparently arbitration, a participative process in which the spirit of the negotiative or micro-legislative process is perpetuated at the two-party level.

The economic concept of efficiency, the "ways and means" which Aristotle said (*Rhet.* 1359b20) was one of the subjects about which law-making bodies deliberate in pursuing the accepted end of public happiness, is paralleled in contract by the microcosm of two individuals negotiating, in the context of what economists call "isolated exchange," for the most efficient means of

achieving mutual benefit (individual happiness). Aristotle analyzed particular justice in contract as a two-phase process. In the first phase, the legislative or deliberative phase, two parties structure or plan future interactions of potential mutual advantage whose specific terms are, as yet, indeterminate. From this perspective, the reference to the "indeterminacy" of justice in Book X of the *Ethics* (1173a15) makes more sense, as does the "dyad of the great and the small" and "excess and defect," to be described below. In the second phase, the judicial, which occurs *after* a voluntary exchange transaction has been agreed to or executed ("when they have already exchanged"), the adjudicative process is applied to settle any dispute about its fairness. The process of arbitration, with its use of equity, provides a structure for reinjecting the ideal of reasonable two-party deliberation into the adjudicative process to correct flaws in contractual arrangements.

Aristotle's description of equity (*Rhet.* 1374b10–15), with its give-and-take negotiative character, makes it clear why it is so appropriate for judicial examinations of fairness in exchange transactions. "Equity," he writes, "bids us be merciful to the weakness of human nature; to think less about the laws than about the man who framed them, and less about what he said than about what he meant; not to consider the actions of the accused so much as his intentions, or this or that detail so much as the whole story; to ask not what a man is now but what he has always or usually been. It bids us remember benefits rather than injuries, and benefits received rather than benefits conferred; to be patient when we are wronged; to settle a dispute by negotiation and not by force; to prefer arbitration to litigation."

Had commentators been sufficiently aware that Aristotle's analysis in the *Ethics*, as he moved from universal justice to particular justice, was in the context of isolated exchange, there would have been less difficulty in deciphering the meaning of the key passage. Economists define "isolated exchange" as two parties exchanging in primary reliance upon their own subjective preferences without reference to any alternative market opportunities. Market exchange, on the other hand, occurs when individuals deduce their particular transactions from their sense of an on-going, pervasive pattern of exchange among large numbers of individuals (an informed market). In market exchange, the publicly known market price itself is evidence of a fair working out of the interests involved in two-party transactions since no seller would voluntarily accept nor buyer pay a price less advantageous than that available elsewhere. In isolated exchange, by contrast, there is no going market price and the fairness of each transaction which divides the "excesses" referred to by Aristotle can only be determined by the appraisal of a third party (an arbitrator or judge) on a case-by-case basis. Although some elements of a market may

have developed in ancient Greece, isolated exchange is more characteristic of pre-market and preindustrial economies with nonuniform goods, an additional reason for the presumption that Aristotle's analysis of exchange was in a judicial rather than a market context.

Even where marketplaces are established for purposes of taxation and/or regulation, as in Athens, isolated exchange does not disappear altogether and in fact still prevails in large areas of the world. Because of the potential benefits inherent in dealing with a less well informed exchange partner who has only limited access to knowledge of a market price, the shrewdest trader in any pair will always prefer isolated exchange to market exchange since the former is free from pressures to conform to a market price. This is why it was thought necessary in preindustrial England to legislate against "forestallers" and "engrossers" and other "middlemen" who attempted to intercept potential market participants and consummate bargains before the market process could begin.[22] This is also why, over large areas of the world, special "finger languages" have been developed to protect two-party bargaining from the scrutiny of parties other than the persons engaged in it. Karl Menninger[23] describes the modern commercial use of finger language: "In the seaports and market places of the Red Sea, Arabia, and East Africa, merchants have evolved a finger language that is understood in every market of every country in the region. Buyers and sellers come to terms underneath a cloth, a fold of garment or a strip of muslin from a turban, by touching the fingers of each other's hand and thus bargaining in complete privacy." He adds, "The privacy thus achieved is one of the main purposes of this commercial finger language, for in these countries all transactions are concluded in the open market place. If idle bystanders and others are not to be let in on the price, seller and buyer must come to an understanding both silently and secretly." "Not only the European, Indian, Arab, and Persian merchants," he says, "but also those from the interior of the continents, the Abyssinians, Somalis, and Bedouins, all understand the finger language of the shores of the Indian Ocean." James L. Y. Chang[24] described the use of commercial finger language in a currency black market in Chentu, China, during World War II, where dealers negotiated with fingers under full, overlapping sleeves. It has also been recorded as occurring in Tibet in negotiations over the purchase of yaks.[25]

The use of finger language in trade is an attempt to maintain private control over a zone of negotiation in the division of the mutual advantage anticipated from isolated exchange, a zone which historically has been continually narrowed by public forces attempting to create a uniform market price. Aristotle recognized the potential pool of benefits engendered by mutually beneficial exchange—the advantage each partner in a pair of "finger" traders hopes to

capture—but he examined the division of the benefits from the point of view of a judge or juror, not from the point of view of an observer analyzing a market process.

The Administration of Justice

The analysis of justice in Book V of Aristotle's *Ethics* is initially directed to generalizing the principles of public and private distributions of assets. The Athenian polity still in Aristotle's day functioned in many ways as a distributive economy. Frequent discussions were held about "distributions" ("entitlements" in modern social theory) because a great deal was distributed: honors of various sorts, free public meals, the profits from the silver mines at Laurium,[26] rations of grain, public entertainment, as well as payments to large numbers of citizens for attendance at assemblies and for jury duty. G. E. M. de Ste. Croix[27] observed that, in his development of the theory of a "mixed constitution" (*Pol.* IV. 8–9), Aristotle viewed entitlements in public prerogatives as an oligarchic protection against otherwise unfettered democracy in that the concept involved an economic and political equilibrium between, on the one hand, the need to protect property rights and, on the other, democratic prerogatives. Xenophon anticipated that, if his recommendations in the *Ways and Means* were followed, the whole population of Athens could be maintained at public expense. Only recently have modern legal and economic theorists attempted to deal with such entitlements or property rights in public largesse.

In his treatment of justice, Aristotle applied the prime mathematical form of his day, the concept of ratio and proportion, to explain the facets of just distribution.[28] He applied the term "distributive justice" to the allocation of shares of a fund on a proportional basis. For such division, he utilized the geometric mean, derived from the geometric proportion, called in Euclid's time "the proportion *par excellence*."[29] The geometric proportion is one in which each party receives a distribution in the same proportion as his merit or contribution. The share of the profits due partners who have put up unequal shares of capital for a venture was used to illustrate the geometric type of just distribution (1131b25–30). He used the term "rectificatory" or "corrective" justice to mean compensation for loss (or award for damages). It is illustrated by redress among equals and is obtained by the arithmetic mean, derived from the arithmetic proportion. In an arithmetic proportion, an amount is taken from one who has received an excess and awarded to another who has suffered a deprivation. It is used to return the parties to a condition of equality. Thus if A and C have equal shares (four units each) and C takes two from A, rec-

tificatory justice would require that two be taken from C and given to A to reestablish the mean of equality.

"Reciprocal justice," the third of Aristotle's classifications, was applied to exchange transactions between two parties. The Pythagoreans, he said, "defined justice without qualification as reciprocity," but he added that "'reciprocity' fits neither distributive nor rectificatory justice . . . for in many cases reciprocity and rectificatory justice are not in accord" (1132b20–25). He illustrated the point by citing a principle from what we would today call tort law that the injustice performed by a wrongdoer and the injustice suffered by an injured party are not necessarily identical. Such a dual subjective definition of injustice leaves a zone of indeterminacy between the subjective nature of the *act* and the subjective *impact* on the other party, more intent and less injury, or less intent and more injury. The harmonic proportion, by assigning intermediate points in terms of opposite extremes, provides a framework for visualizing this relationship by identifying different quantifications of reciprocal justice (or injustice)—"more or less"—from the subjective perspectives of two different parties.

In his discussion of rectificatory justice in voluntary exchange, Aristotle had observed (1132b11–15) that "to have more than one's own is called gaining, and to have less than one's original share is called losing, e.g., in buying and selling and in all other matters in which the law has left people free to make their own terms; but when they get neither more nor less but just what belongs to themselves, they say that they have their own and that they neither lose nor gain." This formulation, however, describes an objectively valued zero-sum exchange where one man's gain is necessarily another's loss.[30] It does not take account of mutual benefit in "just" exchange and is inconsistent with the concept of indeterminacy developed in his discussion of torts, which he presents parallel with his treatment of exchange.

It may be assumed that when Aristotle discussed reciprocal justice, as opposed to rectificatory justice, he was moving toward a more subtle concept than simply the equal sharing of goods in exchange or the redress of grievances. He was surely well aware of the conventional wisdom expressed in Xenophon's report (*Cyrop.* I.iii.15–18), treated in Chapter III, of the exchange of the tunics between the short and tall boys, where Cyrus considered the exchange just because, since each boy got a better fitting garment in the exchange, both parties were better off (gainers) by the trade, whereas his mentor insisted that voluntarism based on individual property rights is also an essential prerequisite of justice in exchange. The two points of view of Cyrus and his teacher posit justice in exchange as requiring not only mutual voluntary choice but as also potentially resulting in *both* parties having *more* than

they surrendered. The measurement of the benefits of trade from the subjective perspective of each participant in an exchange independent of the basis for value used by the other is most easily represented by the harmonic proportion since it permits measurement from two different reference points, in other words dual subjectivity.

This point is implicit in Aristotle's statement (1132b30–34) that "in associations for exchange this sort of justice does hold men together—reciprocity in accordance with a proportion and not on the basis of precisely equal return. For it is by proportionate requital that the city holds together." At 1133a25 he repeats the same idea, this time saying that it is "demand which holds all things together."[31] And, referring to a barter relationship, he adds (1133b1), "But we must not bring them into a figure of proportion when they have already exchanged (otherwise one extreme will have both excesses), but when they still have their own goods."[32]

Aristotle's reference to "both excesses" is clearer if one considers that barter involves the exchange of two surpluses held in excess by the exchanging parties. This idea appears in Aristophanes' play *Acharnians*, where the Boeotian peddler insists (878–900) that he wishes to trade his surplus goods for surplus Athenian goods not available in Boeotia. In Euripides' *Suppliants* (205–10), "commerce over sea" is lauded because "by exchange a country may obtain the goods it lacks." H. H. Gossen, a nineteenth-century economist, systematically analyzed barter in isolated exchange and demonstrated Aristotle's point, that the total welfare of both exchanging parties is enhanced by the association of barter.[33] According to William Jaffé, Aristotle's analysis served as the foundation not only for Gossen's work but also for Edgeworth's "contract curve" and its zone of indeterminacy between negotiating parties.[34] It is unfortunate that most interpreters of Aristotle's exchange discussion have been influenced by conventional nineteenth-century economic theory which posited a competition between suppliers and demanders where the only gain to be made had to be extorted from one or the other, a prospect characterized by Sir Leslie Stephen as "the horizon visible from an English shop-window." Those with such a view, he writes, "cannot bear some of the corollaries" of trade. He adds, "Commerce, they admit in general terms, implies a reciprocity of advantages; but in each particular case they fancy that one side must lose and the other gain. That both sides to a bargain should be gainers sounds like a silly paradox."[35]

It is clear from the analysis developed here that Aristotle's perspective was a bilateral view which did accommodate the idea of two gainers rather than one gainer and one loser, a relationship felicitously illustrated by the harmonic proportion. The idea has persisted in modern theories of mutual advantage in

international trade, but appears to be difficult for some to apply to individual transactions.

The Analysis of Two-Party Exchange

With the aid of the background outlined above, it is time to examine Aristotle's analysis of exchange in some detail. Particularly important for an understanding of the passage is the distinction between isolated and market exchange, the possibility that the analysis was framed in terms of the harmonic rather than the geometric proportion, and that it was from a judicial rather than a commercial perspective. It would be well to keep in mind Scott Meikle's admonition that "it sometimes happens that what one finds in an author depends on one's possession or lack of the equipment necessary to recognize what is there and to identify it for what it is."[36] This is particularly important for material as schematic as the original text with which scholars have had to work, although, from the point of view of the history of ideas, the views that have evolved from attempts to interpret this material are also important, as noted above in reference to Langholm's treatment of the scholastic commentaries.

In his first illustration of two-party exchange (1133a5–1133b5), Aristotle invokes the reciprocal proportion:

> Now proportionate return is secured by cross-conjunction. Let A be a builder, B a shoemaker, C a house, D a shoe. The builder, then, must get from the shoemaker the latter's work, and must himself give him in return his own. If, then, first there is proportionate equality of goods, and then reciprocal action takes place, the result we mention will be effected. If not, the bargain is not equal, and does not hold; for there is nothing to prevent the work of the one being better than that of the other; they must therefore be equated. . . . For it is not two doctors that associate for exchange, but a doctor and a farmer, or in general people who are different and unequal; but these must be equated. This is why all things that are exchanged must be somehow comparable. It is for this end that money has been introduced, and it becomes in a sense an intermediate; for it measures all things, and therefore the excess and the defect—how many shoes are equal to a house or to a given amount of food. The number of shoes exchanged for a house [or for a given amount of food] must therefore correspond to the ratio of builder to shoemaker. For if this be not so, there will be no exchange and no intercourse. And this proportion will not be effected unless the goods are somehow equal. All goods

> must therefore be measured by some one thing, as we said before. Now this unit is in truth demand, which holds all things together (for if men did not need one another's goods at all, or did not need them equally, there would be either no exchange or not the same exchange); but money has become by convention a sort of representative of demand; and this is why it has the name "money"—because it exists not by nature but by law and it is in our power to change it and make it useless. There will, then, be reciprocity when the terms have been equated so that as farmer is to shoemaker, the amount of the shoemaker's work is to that of the farmer's work for which it exchanges. But we must not bring them into a figure of proportion when they have already exchanged (otherwise one extreme will have both excesses), but when they still have their own goods. Thus they are equals and associates just because this equality can be effected in their case.

Consistent with his usual pattern of presentation, Aristotle then restates (1133b4–30) his description of barter in a slightly different way, this time including international trade in wine and corn:

> Let A be a farmer, C food, B a shoemaker, D his product equated to C. If it had not been possible for reciprocity to be thus effected, there would have been no association of the parties. That demand holds things together as a single unit is shown by the fact that when men do not need one another, i.e. when neither needs the other or one does not need the other, they do not exchange, as we do when someone wants what one has oneself, e.g. when people permit the exportation of corn in exchange for wine. This equation therefore must be established. And for the future exchange—that if we do not need a thing now we shall have it if ever we do need it—money is as it were our surety; for it must be possible for us to get what we want by bringing the money. Now the same thing happens to money itself as to goods—it is not always worth the same; yet it tends to be steadier. This is why all goods must have a price set on them; for then there will always be exchange, and if so, association of man with man. Money, then, acting as a measure, makes goods commensurate and equates them; for neither would there have been association if there were not exchange, nor exchange if there were not equality, nor equality if there were not commensurability. Now in truth it is impossible that things differing so much should become commensurate, but with reference to demand[37] they may become so sufficiently. There must, then, be a unit, and that fixed by agreement (for which reason it is called money); for it is this that makes all things commensurate, since all things are mea-

> sured by money. Let A be a house, B ten minae, C a bed. A is half of B, if the house is worth five minae or equal to them; the bed, C, is a tenth of B; it is plain, then, how many beds are equal to a house, viz. five. That exchange took place thus before there was money is plain; for it makes no difference whether it is five beds that exchange for a house, or the money value of five beds.

What is the type of proportion indicated here, and what is reciprocity? Barter and money are introduced into the discussion, but it is not clear what is being distributed or allocated. Nor is the mathematical structure very coherently elaborated. Aristotle's analysis has a decidedly "economic" flavor and yet its meaning is elusive. As a result of the confusion, many commentators have tried to shift reciprocal exchange back into the first category of geometric proportion, frequently in order to force a nineteenth-century labor-theory-of-value analysis on the exchange passage. Despite the confusion and difficulty of interpretation, it is clear that Aristotle, in raising the problem of commensurability, is "asking the right question" in regard to economic theory, at least as far as G. L. S. Shackle's definition of economics, mentioned in the Introduction, as the art of reducing incommensurables to common terms, is concerned.

In a paper which unfortunately attracted little attention, Josef Soudek[38] identified what some translators have called a reciprocal proportion as the harmonic proportion and carefully analyzed its economic significance.[39] Soudek's work has given strong support to the supposition that the vague references in the surviving text of the *Ethics* are indicative of rather complex ideas suggestive of fundamental concepts with long philosophical histories. The clarity with which the elements of these ideas fit together serves as convincing support for the validity of his analysis.

Thomas L. Heath confirms the compelling evidence that a mathematical formulation of substance was involved in Aristotle's use of reciprocity and proportion and suggests the relevance of the harmonic proportion to his discussion of exchange.[40] He demonstrates that attempts of scholars to avoid the issue by assuming that the geometric proportion was intended, or by using the "reciprocal" to mean the inverse geometric proportion, would result in an equation of 1:1::1:1, which is, of course, meaningless.

The Greek concept of harmony, as noted earlier, meant originally "the orderly adjustment of parts in a complex fabric."[41] Its use was later narrowed to its musical connotation but retained a meaning of sequential adjustment in terms of which varied kinds of philosophical and scientific, as well as politi-

cal, ideas could be structured. From the earliest pre-Socratics, paired opposites and sets of paired opposites in equilibria of conflict or mutual attraction were widely used harmonic constructs in science and philosophy.[42] These ideas postulated the existence of a mean or equilibrium point between extremes as the ideal state, and such relationships were investigated by the use of mathematical proportion. Health, for example, was viewed as a mean between extreme or unstable states, and justice, in the same vein, was seen as a mean between "excess and defect," as will be discussed below. One of Philolaus's fragments reflects the notion of paired opposites in equilibrium. "Harmony," he said, "is a Unity of many mixed (*elements*), and an agreement between disagreeing (*elements*)."[43] Moreover, these ideas were extended to include political and legal interaction between heterogeneous elements in society. The Athenian philosopher and musical theorist Damon, reputedly an adviser of Pericles and a teacher of Socrates, maintained that "there [is] an indissoluble connection between music and society, so that musical changes inevitably entail legal ones."[44] Plato, agreeing with Damon (*Rep.* 424c), asserted that "the modes of music are never disturbed without unsettling of the most fundamental political and social conventions, as Damon affirms and as I am convinced." These concepts of harmony contain the premises of the equation as a quantitative point of departure for analysis as well as far more subtle concepts of multiple-factor equilibria and complex cosmologies in some form of dynamic interaction.

With the increasing complexity of Greek society, the Pythagorean presumptions of absolute measurability and harmonic balance were replaced by more subjective approaches to comparative measurement. One of the most famous expressions of this pluralism with an aggregate of subjectively defined values is Plato's statement (*Rep.* 601d) that "the excellence, the beauty, the rightness of every implement, living thing, and action refer solely to the use for which each is made or by nature adapted." Another still valid and useful expression of subjective evaluation is Aristotle's comment on precision in research. "Precision," he stated, "is not to be sought for alike in all discussions, any more than in all the products of the crafts." And he added, "[It] is the mark of an educated man to look for precision in each class of things just so far as the nature of the subject admits; it is evidently equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician scientific proofs" (*N.E.* 1094b14–28). The elaboration of hedonic measurement in Plato's *Protagoras* and Xenophon's extensive development of use value in the *Oeconomicus*, discussed in Chapters II and III, illustrate the ubiquity of treatments of subjective value and utility in ancient Greek literature. Protagoras's

"man is the measure" doctrine, discussed in Chapter VI, carried this subjective perspective into a theory of social consensus based on the public process of the assembly.

When, however, subjective value is applied to human relationships, the sum of the subjective values does not necessarily coincide with the same values judged from some objective perspective. Moreover, when individuals surrender subjective values in exchange for others as the price of association, both parties can potentially value their secondary positions higher than the initial one, as in the Chaldean-Armenian agreement. In Book I of the *Politics*, Aristotle clearly develops this concept of social aggregation, in which the sum of subjective benefit from the association exceeds any summation of independent values. He illustrates it with relationships such as marriage, in which the subjective value of the association to both parties exceeds the subjective value of separate existences to the two persons. Village life, by which specialization is fostered, is given as another example. Aristotle indicates that there is a fund created by association which draws individuals together and that the size of this fund and the potential shares to be distributed are a measure of the unifying strength of a society.[45] In Book III (1280b), he uses the farmer/shoemaker/carpenter illustration again and lists the facilitation of exchange as one of the necessary (but not sufficient) conditions for a *polis* to exist. "What constitutes a *polis*," he asserts, "is an association of households and clans in a good life for the sake of attaining a perfect and self-sufficing existence."

These passages from the *Politics* on human associations are clear evidence that Aristotle's treatment of reciprocal proportion and justice in exchange in the *Ethics* refers to an established body of ideas, despite the obscurity of the text. The arithmetic and geometric proportions are developed there in great detail to abstract the distribution of fixed funds in terms of a commonly accepted or legally determined distribution of shares. However, in establishing fair shares in a barter arrangement between two parties, each desirous of the other's goods, the attraction is that A desires B's surplus goods more than he desires his own surplus goods, and vice versa. These four values make up the preconditions for trade if the respective viewpoints cross or overlap, but the parties must first establish a rapport (Aristotle's "figure of proportion") which takes cognizance of the potential mutual advantage to be obtained from exchange.[46] If a dispute arises over the specific allocation of the pool of benefits (Aristotle's "excesses"), the proper shares will have to be allocated by an administrative authority (the arbitrator or judge). The fact that the example from international trade (the exchange of wine for grain) is found in both the *Politics* (1257a25–35) and the *Ethics* (1133b10) tends to corroborate the common

analytical perspective in the two parts of Aristotle's work. L. B. Shaynin[47] called attention to the fact that Adam Smith in the *Wealth of Nations*[48] also advanced the idea that exchange is induced by the mutual advantage of a potential profit, and that he reasoned that the surplus ("clear" profit) resulting from a relationship between a lender and an entrepreneur should be divided in half.

Can Voluntary Exchange Be Unfair?

In the *Politics*, it appears that Aristotle is thinking of voluntary exchange as that which takes place between economically self-sufficient agricultural villagers who exchange surpluses, which they value less, for their neighbors' surpluses, which they value more. There is neither coercion nor undue dependence, but only the mutual benefit of specialization and exchange which draws men together. Under these conditions, can individuals make bargains that are unjust to themselves, that is, are against their own interests? If there is no mutual benefit, there will be no exchange; the mutual willingness to exchange is thus proof of the fairness of the transaction, particularly when the only evidence of an individual's personal utility or self-interest is his or her voluntary choice of action. This notion was evidently an integral part of the Greek law of sale, since no agreement had any force until the actual exchange was made, and then, as long as it was voluntary, it was presumed just.[49] The idea was assimilated into Roman law and survives in our own legal tradition in the definition of a fair price as one arrived at between a "willing buyer and a willing seller."[50]

The fact that this formulation of the problem left a wide zone of indeterminacy was clearly understood by Aristotle and is illustrated by his quotation (*N.E.* 1136b7–15) from the *Iliad* (VI.215–41), discussed in Chapter V: "Again, one who gives what is his own, as Homer says Glaucus gave Diomede, 'Armour of gold for brazen, the price of a hundred beeves for nine,' is not unjustly treated; for though to give is in his power, to be unjustly treated is not; but there must be someone to treat him unjustly."[51] The legal defense of voluntarism was argued in the second of the *Tetralogies* of Antiphon,[52] where the voluntary act of a boy when he ran into the path of a javelin thrown during practice resulted in his death. His voluntary act, it was argued, negated the presumption of moral responsibility on the part of the javelin thrower. Plutarch[53] reported that Pericles' son ridiculed him for "squandering" an entire day discussing with Protagoras the legal implications of this incident. It will be recalled that one of the earliest treatments of voluntarism is found in Hesiod's account of the Promethean bargain, discussed in Chapter V.

There was thus a fairly clear tradition for the notion that there are "natural" confines or preconditions in terms of which voluntary exchange can and will take place. Although these forces may circumscribe justice, there still remains an area of potential indeterminacy which must be specifically settled by bargaining or by legal arbitration after an initial commitment has been made to participate in exchange. There is a possibility that, at least to some scholastics, "just price" may have meant the zone of possible prices within the "natural" preconditions for trade. This is evidently the area Aristotle was attempting to analyze by means of proportion. Within this zone, a secondary process, either personal or civil, would have to resolve the precise terms of the exchange. This is also the area analyzed in modern economic theory by the contract curve in the Edgeworth Box.[54]

The following passage in the *Ethics* (1134b15–20) frames the problem of indeterminacy: "Of political justice part is natural, part legal,—natural, that which everywhere has the same force and does not exist by people's thinking this or that; legal, that which is originally indifferent but when it has been laid down is not indifferent, e.g., that a prisoner's ransom shall be a mina."[55] The text explains that natural justice does not imply physical law but only physical propensity, like the tendency to be right-handed, while legal or naturally indifferent justice suggests those relations determinable by fiat or decree. This distinction is not as narrow as a utility concept, but is rather a notion of two levels of social process reminiscent of the pre-Socratic idea that physical health is the result of proper proportional balance,[56] while spiritual health results from rational or infinite processes. Although the natural forces delineating exchange are here analyzed as leaving a zone of arbitrary indeterminacy (to be discussed below), the concept of subjective utility in exchange suggests measurable natural forces amenable to analysis with the mathematics of proportion.

The Harmonic Mean, the Reciprocal Proportion, and the Analysis of Exchange

As mentioned earlier, the clarity of Aristotle's description of barter in the *Nicomachean Ethics* has been clouded by the inability of commentators to relate the harmonic mean (the traditional third mean) and the harmonic proportion to his analysis. Heath indicates that there was considerable confusion in the terminology applied by the ancient Greeks to the concept of proportion and its application to the three means (arithmetic, geometric, and harmonic).[57] The two proportions, the arithmetic and the geometric, produce the

arithmetic and geometric means respectively. The third or harmonic mean (the "most perfect mean") was derived by the formula[58]

$$a:(a + b)/2 = 2ab/(a + b):b$$

Using 12 and 6 for a and b respectively, we get 12:9::8:6. Why this has been termed a *reciprocal* proportion by some authors has been a source of mystery, since on its face it appears to be a simple geometric ratio. The problem is compounded by the confusion associated with Euclid's definition of "reciprocal figures."[59]

Tradition has it that the harmonic mean was distinguished by Archytas of Tarentum,[60] an eminent Pythagorean philosopher and mathematician and a contemporary of Plato. He is also sometimes credited with developing the harmonization of the tetrachords[61] and with laying the mathematical basis for analysis of the musical fourth and fifth. The Pythagoreans had long used the monochord, a single-stringed instrument developed for the purpose, as the basis for experimentation with physical expressions of "natural" number, and they expressed some of their concepts of proportionality with this device.[62] During this period, the notion became current that matter and form are composed or built from a common unit, whether the atom of the atomists, the point of the geometers, or the number 1 of the arithmeticians, and that everything must therefore be commensurable and expressible in quantitative terms.[63] Consistent with this view, the Pythagoreans believed that all things are commensurable in terms of whole number ratios, and their experiments with harmony were aimed at exploring the ratios implicit in sound, form, and social process. The discovery of irrational numbers, which are not commensurable, must thus have caused some consternation in their ranks, and in the fourth century B.C. the Pythagoreans were trying to overcome this frustrating stumbling block.[64] For a scientific priesthood convinced that number and measurement are the ultimate essence of all things and that the basic numerical relationships comprising the total universe could and should be understood, the simple fact that the diagonal of a square could not be made commensurable with its side raised horrendous theological questions. Of course, the relationship of the side to the diagonal of a square is $1:\sqrt{2}$, the latter being an irrational number, i.e., not expressible as a whole number ratio. Defining all possible magnitudes in terms of one another became a source of much mathematical progress and of many useful formulations which have helped later scholars organize and manipulate data. During this period, some Pythagorean, possibly Archytas, devised a system for locating the harmonic intervals of the fourth and fifth within the octave by stating the changes in string

length in terms of both ends of the octave; in other words, making them commensurable.

According to Heath there was a tradition that Pythagoras had gotten the harmonic proportion, called by Nicomachus the "most perfect proportion," from the Babylonians.[65] Archytas's description of the harmonic proportion specifies, in referring to three terms, that "by whatever part of itself the first exceeds the second, the second exceeds the third by the same part of the third."[66] Using 12 and 6, this explanation indicates that a mean is one-third of 12 less than 12, or 8, and is also one-third of 6 greater than 6. This defines the mean in terms of a mutual reciprocal interaction of the extremes. Soudek[67] maintained that this interpretation illustrates dual subjectively defined proportional relationships with a common term. The only problem is that this proportion only locates the musical fifth, and not the fourth interval (which would be 9 in this context). It will also be noted that if a larger fraction is used in this proportion, the two subjectively defined points would not coincide, but would overlap or overreach one another. Heath concluded that Plato located the harmonic fourth by adding a second proportion of the arithmetic variety, halving the difference between the two extremes of the octave.[68]

The use of 12, 8, and 6 to illustrate the harmonic proportion may have been influenced by the fact that this series was considered an expression of the "harmony" of the cube (which has 12 edges, 9 symmetry planes, 8 corners, and 6 faces).[69] Moreover, 12 was identified by some ancients as an "overperfect number" because the sum of its parts exceeds the whole.[70] The parts of a number were defined as its whole number submultiples. In the case of 12, these are 1, 2, 3, 4, and 6, which add up to 16. The concept of "amicable" numbers, reputedly a Pythagorean notion and, according to Raymond Wilder, of interest to Fermat, Descartes, and Euler, is based on the idea of adding the sums of submultiples to determine whether the relationship between paired numbers is "friendly."[71] The notion that the sum of the submultiples of a number can exceed the number itself may have offered a mathematical image for the idea that the sum of the elements or utilities of an exchange can exceed the whole, or final, exchange value of goods.

An interesting aspect of the harmonic problem which merits further investigation is the mathematics and technology of the magadis, thought to have been a dulcimerlike, four-stringed instrument tuned with an octave interval to accompany the voices of men and boys singing together. The notion of relating two extremes seems to have given rise to a verb, "to magadize," whose meaning is obscure at present.[72]

The third or harmonic mean and its proportion may be understood in terms of the following technical process, reconstructed from a fragment at-

tributed to Aristotle.[73] This fragment, in which Aristotle relates the ratios of string length to the extremes of an octave, clearly indicates his understanding of the third or harmonic mean and gives further support to the presumption that in the *Ethics* it was this mean which he intended in his analysis of exchange. Following the ratios used in the Aristotelian fragment (illustrated in Figure 1), assume a monochord twelve units long tuned to middle C. Shorten the string with the moving bridge by a ratio of 2:1, from 12, to point 6, and the note is an octave higher. Reciprocally, lengthen the string by 1:2, from 6, and it is an octave lower again. Thus, 6 is defined from the subjective perspective of 12 by applying the fraction 1/2 to 12, while, from the point of view of 6, 12 is defined by applying the reciprocal of the same fraction, 2/1, to 6. Commensurability from both subjective points is thus achieved reciprocally. Now, shorten the string from 12 units to 9, e.g., by a ratio of 4:3, from 12:9. This produces a note a fourth above middle C. Next, with the bridge at point 6, high C, lengthen the string by the ratio of 3:4, from 6. This places the bridge at point 8 and produces a fifth above middle C. The common measure, the ratio 4:3 and its reciprocal 3:4, locates the harmonic fourth and fifth from opposite ends of the octave. If, however, the twelve-unit string is shortened by 3:2, from 12:8, it produces the harmonic fifth; but when the ratio 2:3 is reciprocally applied to lengthening the string at point 6 (2:3::6:9), we get 9, which is the musical or harmonic fourth. Thus, when the upper extreme is lowered by the same part of itself (4:3) as the lower extreme is lengthened reciprocally by part of itself (3:4), the fourth and fifth are located at 9 and 8. If 3:2 is used, the shortening from 12 reaches to the fifth at 8, but the lengthening from 6 overreaches the first point at 8, lowering the note to the fourth at 9.

The explanation of the mathematical procedure for designating the fourth and fifth from two extremes uses *reciprocals* of the fractions added or subtracted from the extremes, in contrast to the simpler procedure of fixing the harmonic mean by adding or subtracting the *same* fraction to each extreme. Applying the ratio 3:4 to 12 and its reciprocal, 4:3, to 6 to obtain the musical fourth and fifth at 9 is, however, a cumbersome way of using a geometric proportion to identify these intervals. If this was the way the Greeks applied reciprocity in their musical experiments, they would have discovered that the harmonic proportion could only designate the musical fifth, 8 in this illustration. This background, however, is still relevant to Aristotle's suggestion that a third proportion was illustrative of the first stages of barter when two parties with mutually subjective but interlocking perspectives begin bargaining.[74]

This type of presentation seems to have been one of the few mathematical formulations available to Aristotle to elucidate the problem of mutuality in exchange, and it was probably its obscurity which caused it to be lost to later

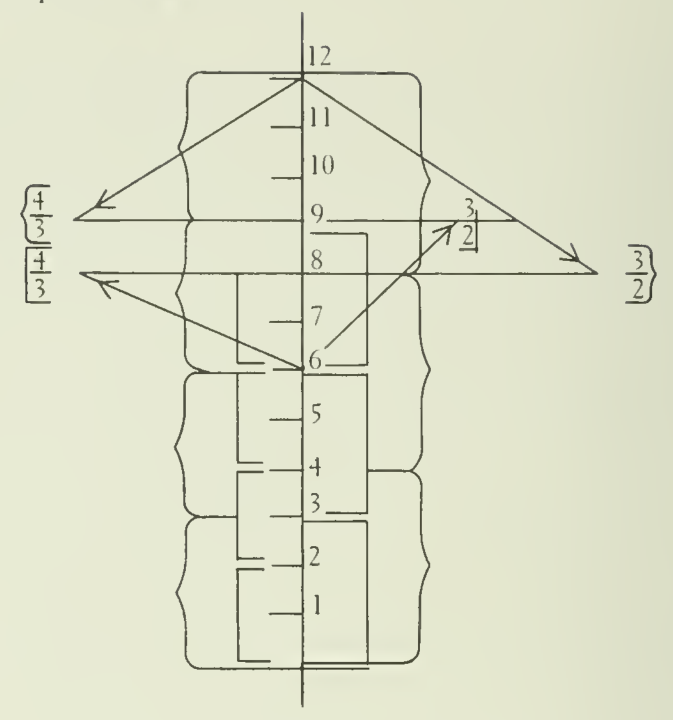


Figure 1 A reconstruction of the application of the ratios 4:3 and 3:2 to the extremes of an octave set up in terms of the Aristotelian fragment which uses the units 12, 9, 8, and 6 in its example. See *The Works of Aristotle* (Ross edition), XII (*Select Fragments*), pp. 95–97.

commentators. However, not only does this reconstruction of the musical theory used by Aristotle fit in a crude way the social phenomena he was attempting to elaborate, it also parallels another contemporary development in musical harmony, the doubling of the tetrachords, an innovation attributed to Archytas. The simple four-note scale which up until that time had been the only one in use, was seen to be inadequate for anything beyond the oral recitation of poems. The scale was therefore doubled in two ways, creating either a "disjunctive" double tetrachord of 8 notes, or a "conjunctive" double tetrachord of 7, with a lower and a higher note locking on a common tone.

With this development, locating the harmonic fourth and fifth from octave intervals became important. Also, the doubled tetrachord provided a vehicle for expressing the concept of two sets in interaction. This would have been considered a revelation in a world dominated by the Pythagorean concept of music as the source of numerical relationships inherent in all things, including the heavenly bodies, the "music of the spheres."

Aristotle's Figure of Proportion for Analyzing Exchange

What was meant by Aristotle's phrase "figure of proportion" is difficult to reconstruct. Whether the box diagram (Figure 2) with crossing diagonals with which Nicole Oresme[75] illustrated his fourteenth-century translation and commentary on the *Ethics* was included in Aristotle's original text or was added later by commentators who were guessing at its meaning is impossible to determine.[76] Odd Langholm's *Price and Value in the Aristotelian Tradition* has a dust jacket carrying an illustration of a "Figure of Proportion" which, he says, was used throughout the scholastic period, from Grosseteste and Aquinas on, to explain Aristotle's analysis of exchange. The oldest manuscript of the *Ethics* he has seen[77] shows the characteristic crossing lines of the figure, but no square. "It has been suggested," he says, "that the lengths of the two lines express the correct proportions." But, he adds, "when the lines are put in a square they must be given equal lengths, and this line of interpretation is ruled out. Anyhow, Aristotle's geometrics is certainly at the core of econometrics and the last word has not been said about it."[78]

It is sufficient to say here that a figure of this type suggests a proportioning of subjective utilities in exchange. The numerous copyists and commentators through whose hands the documents have passed over the centuries may well be responsible for the confusion in the explanation of the mean of exchange which they did not quite comprehend. This is understandable in view of the fact that the passages on exchange are obscure and confusing, in contrast to those where Aristotle elaborates in exhaustive detail on distributive and rectificatory justice. At any rate, it is clear that the situation in Aristotle's time was one in which the mathematical tools then available were inadequate to elaborate the sophistication of the ideas involved—the reverse of the present situation in economic theory.[79]

Aristotle's basic statement of two-party exchange, invoking the reciprocal proportion between builder, shoemaker, house, and shoe, quoted above, suggests an equating of subjective utilities as the precondition of exchange, but the rigidities of the square figure with crossing diagonals did not facilitate the illustration of the reciprocal overlap of mutual need which, he repeatedly emphasized, draws men together in exchange. The limits of the diagram are indicated by his seeming recognition that the figure reveals nothing about the distribution between the parties of the fund of mutual benefit resulting from the exchange, nor of the justice of the exchange within the zone of voluntary choice, for he cautions (1133b1) that "we must not bring them into a figure of proportion when they have already exchanged (otherwise one extreme will have both excesses) but when they still have their own goods."[80]

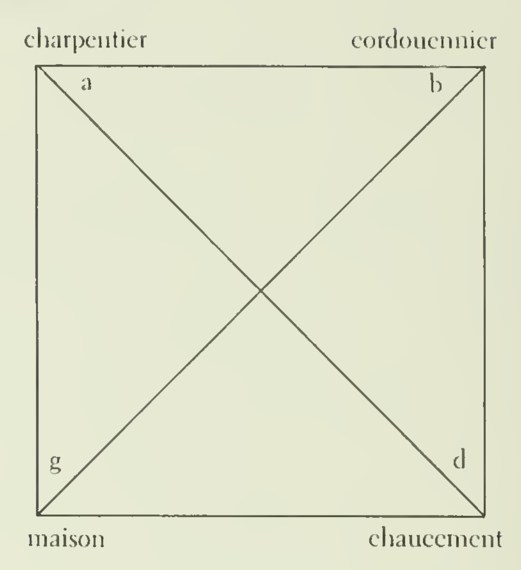


Figure 2 One of the figures Oresme used in his fourteenth-century commentary on Aristotle's works.

It may be assumed that any figure Aristotle used in this connection would have been designed to illustrate the "natural" foundation for isolated voluntary exchange, in which the subjective appraisal by each party of his own goods, compared with those of another, creates a zone of reciprocal mutuality which induces exchange. If, for example, A has grain which he is willing to exchange for wine at the rate of 1 bushel of grain to 5 jars of wine, and B has wine which he is willing to exchange at the rate of 10 jars of wine to 1 bushel of grain, within these limits of voluntary choice there is a resulting fund of mutual benefit which must be resolved on the basis of "more or less" grain or wine, since both A and B would feel exceptionally benefited at a variety of intermediate levels of exchange. For example, a rate of exchange of 8 jars of wine to 1 bushel of grain would give A a bonus of 3 jars of wine and B a saving of 2 jars of wine over the original ratios at which the two were willing to exchange.[81] Such benefits would be characteristic of any of several different exchange rates within the outer limits of need or demand. This is why modern economists say that in isolated exchange, price is moot.

Aristotle saw that it is the potential surplus of utilities inherent in trade which draws individuals together and that, after they have been "brought into a figure of proportion," they must negotiate (or have an arbitrator decide) as to the distribution of the surplus utilities created by their willingness to exchange. Although the geometric tradition was so dominant in classical antiquity that nearly every conceivable relationship was reduced to a plane or a solid figure, we can only speculate about what Aristotle's "figure of proportion" was intended to illustrate, if in fact anything was intended beyond a pic-

ture of the natural limits within which exchange would be confined. However, it seems clear that the "figure" must have referred to the first stage in barter in which each party correlates what he offers with what he wants.[82]

This interpretation of the "figure of proportion" which Aristotle used to analyze exchange is supported by the much clearer reformulation of the same issue in Book IX of the *Ethics*. He there explains that, in appraising value, the buyer's assessment of the worth of a good should be based on the worth he attaches to it when he initiates negotiation and *before* he has possession of it.[83] Aristotle explains (1164b15–20): "For most things are not assessed at the same value by those who have them and those who want them; each class values highly what is its own and what it is offering; yet the return is made on the terms fixed by the receiver. But no doubt the receiver should assess a thing not at what it seems worth when he has it, but at what he assessed it at before he had it."

The emphasis on the subjective measure of value survives in modern Anglo-American law in the detriment/benefit theory for appraising the enforceability of contracts. The doctrine is frequently illustrated by crossing diagonals representing detriments moving from each party and becoming benefits to the other. While adequacy of consideration is not questioned by courts within a wide range as a prerequisite for the enforceability of voluntarily arrived at contracts, the existence of *some* consideration (or detriment) must be demonstrated. However, such detriment is to be measured in purely subjective terms, as illustrated by the classic case of *Hamer* v. *Sidway*,[84] where the court held that a plaintiff suffered a detriment when he surrendered a subjectively valued right to which he was entitled, namely to drink liquor, use tobacco, etc. The court rejected the argument that the forgoing of such acts is an objective benefit and should not be interpreted as the detriment or payment necessary to support a binding contract. However, after a contract is recognized as being enforceable on the grounds of adequate subjective benefits and detriments to support a presumption of mutuality, the courts would still have to settle a disagreement over damages in the event of breach by either party.

The More and the Less: Excess and Defect

The distinction between natural and legal considerations and between physical and mental aspects of things was an integral part of ancient Greek thought. Aristotle expressed it thus (*N.E.* 1134a30–1135a): "The things which are just by virtue of convention and expediency are like measures; for wine and corn measures are not everywhere equal, but larger in wholesale and smaller in

retail markets. Similarly, the things which are just not by nature but by human enactment are not everywhere the same." It should be remembered that, in his discussion of justice, Aristotle was dealing with both justice in exchange and justice in what is now called tort law. For this reason, the problems of voluntarism, intent, and unjustifiable injury were brought into the analysis of the justice or injustice of particular acts.

The problem of achieving legal justice in exchange was summed up as the approach toward a mean in a zone of free choice between two parties, just action being "intermediate between acting unjustly and being unjustly treated; for the one is to have too much and the other to have too little." Justice, then, is "a kind of mean, but not in the same way as the other virtues . . . because it relates to an intermediate amount, while injustice relates to the extremes" (*N.E.* 1133b30).

Phrases like "too much and too little," "the more and the less," "the greater and the smaller," and "excess and defect" reappear often in Aristotelian material and have deep roots in earlier literature. There is ample reason to assume that such ideas are literary cousins of the mathematical constructs designed to close in on irrational numbers by mathematical progressions or series.[85] There was still enough Pythagoreanism in Aristotle's thinking for him to accept the existence of a "best" set of arbitrary laws, as well as an approachable "most just" bargain in exchange within the limits of choice and reciprocity.

The use of a "figure" by Aristotle in his discussion of exchange leads one to speculate that a more complex structure for analyzing the mean or "most just" bargain may have been involved, with money as the modulating element. When he says that "all goods must . . . be measured by some one thing," he raises the problem of commensurability.[86] He poses demand (need), represented by money, as the mechanism through which reciprocity is effected and the terms "equated." This is immediately followed in the text by the previously quoted passage which cautions that two parties should not be brought into a figure of proportion after they have exchanged.

The explanation of the significance of this distinction, found in Book IX of the *Ethics* (1164a15–20), has not been discussed in the commentary literature on Book V. It is true that in the Book IX passage Aristotle is discussing friendship, but it is plainly stated that exchange is "the political form of friendship." Further, he illustrates this kind of friendship with a comparison of the returns in an exchange between a shoemaker and a weaver. He also clearly restates the difference between value appraisal *before* exchange and *after* exchange: "For most things," he says, "are not assessed at the same value by those who have them and those who want them; each class values highly what is its own and what it is offering; yet the return is made on the terms fixed by

the receiver. But no doubt the receiver should assess a thing not at what it seems worth when he has it, but at what he assessed it at before he had it." The obvious implication is that the figure contemplated sets up a pattern of reciprocal utilities or demands which overlap from opposite sides of the figure and yet leave an area for further negotiation, with money serving as a convenient common term in this rational or legal phase of the bargaining process. In other words, after (and not before) the parties are drawn together but before a bargain is struck, there is a competitive relationship operating where one man's gain is another's loss. This situation requires an analysis of the dynamic interaction between two parties with conflicting interests, either as bargainers or as litigants, moving toward some common agreement.

The evidence suggests that Aristotle used reciprocal ratios in terms of the harmonic proportion to frame the relationship between two parties establishing the basic rapport appropriate to exchange. It would be necessary, after the parties had come together but while they still had their own goods, to arrive at a precise exchange falling somewhere within the defined zone of potential mutual benefit. Should a dispute arise after a transaction had been concluded, an arbitrator could retrospectively reconstruct a fair bargain by listening to first one party and then the other. There is a well-developed treatment of this dialectical process in the philosophical and rhetorical literature, and Kenneth M. Sayre's recent reconstruction of the mathematical basis for Plato's theory of dialectic with which disputants closed in on the Ideas[87] lends credence to the notion that Aristotle may have used the same mathematical perspective in approaching the parallel concept of "fair bargain." Sayre follows A. E. Taylor and D'Arcy W. Thompson in developing the mathematical dyad with which irrational numbers were approached as the intellectual prototype of such notions as the "great and the small," the "more and the less," and "excess and defect." The incommensurability of the diagonal with the side of the square was approached by the ancient Greeks with arithmetic series or ladders that closed in on irrational numbers—the "dyad of the great and small"[88] which vividly illustrates a bipartite interaction from two sides moving toward an approximate or irrational number, an Ideal Form which can be approached but never achieved.[89] The ratio of the golden mean, .618+:1, was the most famous of the irrational numbers which the Greeks strove to identify with a simple cumulative series whose fractions are always a little more or a little less than .618+.[90] This ratio is expressed geometrically as the "golden section," a line divided so that the smaller portion is to the larger as the larger is to the whole. These sections were termed the "major" and the "minor" or the "divided line."

Aristotle, unlike the Pythagoreans, did not treat mathematics as an expres-

sion of reality but simply as a tool for analysis. He could not, however, entirely escape the inertia of his times and tended to feel that there is a rationally approachable, though not necessarily attainable, ultimate in all things. In this context, it would be reasonable to expect that he would be inclined to think in terms of a symmetrical adjustment process following the pattern of the dyad,[91] the "more and less" of the natural cumulative series of the golden mean (1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, etc.). This progression is known today as the Fibonacci series.[92] It will be noted that each succeeding number is the sum of the two preceding numbers, and that the fraction made by any two succeeding numbers, as one proceeds, constantly approaches, by alternatively a little more and then a little less, closer and closer to the number .618+. For example, 1/2, .500; 2/3, .666; 3/5, .600; 5/8, .625; 8/13, .615; etc.

That Aristotle was familar with Eudoxus's mathematical work can be taken for granted. When he first came to Plato's Academy as a student of seventeen, around 368 B.C., his arrival coincided with the return to that institution of Eudoxus, one of the most eminent mathematicians of antiquity, who is credited with developing the "method of exhaustion," an approach to troublesome irrationals. This formulation, an arithmetic ladder developing ratios approaching an irrational as inscribed and circumscribed polygons might approach a circle, is in a pure, rather than geometric form. It is of interest to us because the construct bypasses Zeno's paradoxes by maintaining the distinction between two terms from which measurement is derived. The arithmetic ladder, which deals with the irrational $1:\sqrt{2}$ illustrates the "more and less" principle in its full subtlety. It is generated by adding the two terms of a rung to make the first term of the second rung; then, by adding the first term of the second rung to the first term of the preceding rung, one gets the second term of the second rung. The fraction X/Y in the ladder below, when followed down, line by line (1/1, 2/3, 5/7, 12/17, 29/41), is alternately (but decreasingly) a little more, then a little less than $1:\sqrt{2}$.

X	Y
1	1
2	3
5	7
12	17
29	41

In addition, if each line is analyzed with the phrase $Y^2 - 2X^2$, the result will be seen to equal $+1$. The rungs of the ladder alternate, equaling $+1$, then -1: more and less. The Fibonacci series produces a similar expression of the

"more and the less" through an arithmetic dialectic when one subtracts the square of any number in the series from the multiple of the number immediately preceding it and the one immediately succeeding it.[93]

With these formulations in mind, it is difficult to impute trivial or casual verbal meanings, or even purely geometrical ones, to Aristotle's exchange formulations. Certainly the surviving literary presentation is far more sophisticated than the mathematical one, but, considering that this was an age pervaded by the Pythagorean infatuation with number (when, for example, marriage was symbolized by the number 5, and justice by the square or by the number 4), it is hard to ignore the possibility that a careful retranslation and analysis of the manuscripts from which our Aristotelian material is taken by one cognizant of this background may very well reveal clues to a systematic quantitative expression of mutuality. A formal, dying, pendulumlike mathematical formulation of the bargaining process within the confines of "natural" justice and mutual benefit in trade, symbolized by the harmonic proportion as the basis for an arbitrator arriving at a determination of "fair" bargain, also seems intrinsic in the extant material.

Despite the uncertainties inherent in the analysis of documents which have been handled by generations of copyists, two methodological aspects of this material are significant. The first is that Aristotle evidently was unable to formulate a conceptual relationship with sufficient clarity in abstract mathematical terms to guarantee its perpetuation through periods of cultural and economic chaos. Though he rejected the constraining concepts of Pythagorean natural geometry, he nevertheless was bound by the cultural inertia of his age and looked toward a natural module of some sort in a symmetrical world of balanced relationships. The best mathematical tools of the period were not entirely free from this naturalism, nor were they adequate for the subtle social analysis Aristotle was attempting.

Secondly, a study of the Aristotelian material is instructive because of the questions it poses regarding the conditions necessary for the development of theoretical formulations of social processes and the limits imposed by cultural preconceptions. Aristotle's basic theory of exchange, with the geometrical figure included in commentaries such as Oresme's, was at the elbow of every educated European for five hundred years before it was resurrected with apparent innocent "originality" by such writers as Condillac, Turgot, and Gossen in the eighteenth and nineteenth centuries. The Aristotelian theories of mutuality and reciprocal demand are the general case of which comparative advantage is a particularization. Despite the role of the *Ethics* and the *Politics* in the education of Europe from the Renaissance to the end of the nineteenth

century, Wicksteed evidently was the only twentieth-century economist who recognized the importance of our Aristotelian heritage, even at a general level.[94] In contract law, our legal tradition has perpetuated mutuality in the "willing buyer–willing seller" principle of "association" in the requirement of consideration as a condition of a fair or just bargain or sale. The reversion of nineteenth-century economists to naturalism in price theory, emphasizing an equilibrium between a seller controlled by natural cost to which he applies rational adjustment, on the one hand, exchanging with a buyer rationalizing emotional and hedonistic or instinctive responses, on the other, is an ideological digression from a pure equilibrium analysis. The shift from the pre-pricing analysis of "social surplus" to the post-pricing analysis of "consumer surplus," on the one side, and "differential rent," on the other side of the exchange, perpetuates perspectives derived from the analysis of isolated exchange.[95]

Aside from methodological considerations, the most fundamental question of substance in this material is the failure of the ancient Greeks to put forward a theory of general market price. On this, we can agree with Finley[96] that "pricing was . . . not Aristotle's concern." However, this is not to say that he did not develop a body of analysis that contributed significantly to the growth of economic theory. Although we know that some urban centers in classical times were heavily dependent upon trade, particularly upon imported grain, this dependency was not a characteristic of the ideal self-sufficient community envisioned by Aristotle and was not the primary subject of his concern in Book V of the *Ethics*, where his attention was focused on the judicial resolution of disputes arising from isolated exchange. In the *Politics*, which is more economically oriented, Aristotle projects a political economy in which supply is approached from the perspective of use value.

One reason for the absence of a market theory in ancient Greece was that it appears that either government regulation of prices or private monopoly was more characteristic of trade in uniform commodities such as grain than was a free market.[97] Aristotle (*Ath.* 51) reported that Athenian market officials controlled both the quality and mark-up on grain and required a set ratio of imported grain to be put on the market. The wages of female musicians, he mentioned (50), were officially set at two drachmas. If there was bidding for their services, their employment was decided by lot. Despite the evidence for some mass production,[98] most goods were probably quite varied in quality of material and workmanship. Therefore, the individual, isolated bargain was more likely to characterize trade than a market process. As Gordon suggested in his analysis of Latin American markets, the psychology of profit associated with an economy in which each individual sale is more important to the seller

than the general market process results in a business tradition of "low volume, high unit price" (LV=HUP). This phenomenon, as he noted, needs to be understood in dealing with underdeveloped countries.[99]

At the simplest level, the Aristotelian material deals with the general "natural" or institutional constraints which box in the price-forming process in exchange. The actual, specific price is left to be determined either by bargaining between two parties or by arbitrators. We know that panels of market officials set value for purposes of calculating the 2 percent import and export duties in the entrepôt of Athens and that an oath by a seller (*Laws* 917) was relied upon as a source of data for most transactions that required an evaluation of goods.

With unique goods in isolated transactions, the only persons in a position to allocate the surplus utilities generated by the trade are the two parties involved or, alternatively, an arbitrator. While municipally administered price would eliminate the need for a concept of general market price for standardized products, in the isolated transaction an oath taken by one of the parties operated as the accepted system for determining value. This is the significance of Aristotle's reference (*N.E.* 1133a1–5) to the "temple of the Graces" in connection with "the requital of services" in his discussion of exchange. It will be remembered that this was also the system used by Protagoras. After instruction, a pupil could take an oath in a temple as to the value of Protagoras's services, and this would be the cost of the instruction.[100] This procedure, since it invokes an individual's own concern for public credibility, to that extent incorporates a general public consensus as to value into the price-forming process.

The oath taken by a litigant before an arbitrator, according to Plescia, was called the "Oath of Rhadamanthus." Private arbitrators, chosen by both parties in a dispute, could make their decisions final and not subject to appeal by the taking of an oath.[101] In the vexing problem referred to earlier of establishing the value of a prisoner or a slave, the arbitrator was legally required in reaching a decision to rely on his own independent judgment, supported by an oath, rather than on the contentions of the litigants. This pattern of reliance upon sworn public declarations, both by individual disputants and by arbitrators, seems to have been the closest corollary in ancient Greece to the consensual determination of value which results from a market process.

Although Aristotle ends Book V of the *Ethics* with a reference to Plato's contention that one must maintain a rational, ethical balance of one's inner soul, it is clear that he was primarily concerned in this work with the process for settling disputes between individuals and in maintaining a rational balance between individuals in a community. His system for mediation between inter-

ests had as its objective the achievement of political justice (a question, according to Meikle, of "regulating, or finding some form of *philia*, for buying and selling")[102] that would bind men together in a system of law to create his ideal, self-sufficient state. While Aristotle's "political form of friendship" was not a market concept, it is clearly a political-economic view of the social order. His *Politics*, to which we turn next, was directed to an analysis of individual interactions which culminate in the political-economic process.

VIII From Two-Party Exchange to Social Economy: Aristotle's Theory of the *Polis*

Natural wealth does have a limit and a bourne, which is drawn around it by utility, as by a compass.

—Plutarch[1]

In his *Ethics* Aristotle treats two-party exchange from a judicial point of view, while in the *Politics* he generalizes two-party relationships to develop a theory of the *polis,* building upon the household or *oikos* as the basic economic and social unit of a political economy.

The Greeks used the word *oikonomia*[2] to refer to a formal discipline, estate management and public administration (the "royal art" of Plato and Xenophon), a usage that maintained some continuity for more than two thousand years before the discipline became known as political economy.[3] Aristotle's study of the household as a unit of the political economy of the *polis* was framed in terms of *oikonomia.* In Book I of his *Politics* he systematically builds a theory of the socioeconomic process as a whole from an aggregation of constituent atomistic units tied together by mutually beneficial exchanges broadly conceived in terms of various reciprocal relationships.[4] This web of natural need (in modern economic terms expressed loosely as "demand" or a "willingness to exchange") introduced a dualism which has persisted in economic thought to this day. The components of this dualism are rational self-interest and natural need as explanations of human relationships.

In his analysis of the *polis* Aristotle did not simply follow the theme of rational self-interest formulated by Plato. Plato had emphasized that ethical hedonism will prevent an individual from knowingly (voluntarily) being unjust to himself. Acting against one's own self-interest, he thought, would cause a disequilibrium in the inner soul. For Plato, this meant that intellectually competent individuals would follow the guidance of their intellectual superior, the philosopher-king. For Aristotle, however, hedonic self-interest was not explicable solely as a problem of the inner soul; he sought an explanation in terms of interactions *between* individuals. But despite his commitment to the more democratic or atomist tradition in evaluating self-interested ex-

changes between individuals, he still assumed an ultimate rational purpose in social interactions. In the closing paragraphs of Book V of the *Ethics* he points out that if an individual takes less than his apparently fair share in an exchange, this is not necessarily an indication that he is irrational since, he explains, it is not in an individual's power to treat himself unjustly in a voluntary exchange. This implies that voluntary exchange, by definition, is rational and fair. The lesser part, he explains (1136b20), may be presumed to be supplemented by "honor" or "intrinsic nobility"—what modern economists would term "psychic value." In such a perspective, all exchanges are not only rational but are also in equilibrium.[5] The premise of a necessary, rational superstructure undergirded with perfect knowledge leaves for the investigator or observer only the problem of filling in the unknown psychic values to justify or validate the presumption of equilibrium and equality in the general system of exchange—the political *philia*—that holds society together. This notion was reinforced by another ancient Greek concept, that of a natural hedonic interaction that generates a competitive equilibrium of interests, an idea that has been attributed to Antiphon.[6]

Aristotle did not directly answer the basic question of how primarily self-interested units can achieve the stability of mutually beneficial association. Hobbes clearly saw this dilemma when he characterized the condition of man as "a war of everyone against everyone" and the life of man in a state of nature as "solitary, poor, nasty, brutish, and short."[7] He accepted the Platonic necessity of a ruling authority (the "sovereign") providing the order (justice) out of which mutual interaction could develop.[8] Protagoras had solved the problem with his principle of *aidos*, or "fellow feeling," which his myth represented as having been sent to man by Zeus to permit him to live in cities with his fellows. As mentioned earlier, Adam Smith understood the necessity for a similar prerequisite to organized society, calling it "human sympathy" in his *Theory of Moral Sentiments*.[9] Aristotle dealt with this issue indirectly with a presumption of pervasive rationality and, more specifically, with his theory of political affiliation or *philia*, in which commerce, as well as household and public *oikonomia*, functioned.[10] In Aristotle's view, the rational force in the individual dominates his relations and associations with others, and the rational force in the *polis* dominates the effective organization and administration of the state. This sense of macrocosmic social process gave substance to the tradition of public administration that carried the name of political economy through the centuries. Only in the nineteenth century with the development of capitalism was the province of political economy or economics reduced to a more limited scope and firmly attached to the concept of a market equilibrium.

The Structure of the Polis

At the beginning of Book VII of the *Politics*, Aristotle discusses the difficulty of determining the nature of the ideal constitution for a city-state or *polis*, or at least the best that can be approximated under given circumstances. He opens the discussion (1323a) by framing the macro-micro aspects of the problem: "We must . . . find," he says, "some agreed conception of the way of life which is most desirable for all men and in all cases; and we must then discover whether or not the same way of life is desirable in the case of the community as in that of the individual." This formulation of the problem of composition may easily fall into either a purely political or ethical frame of reference, but in both the discussion that immediately follows and in the broader treatment in Book I of the *Politics*, the elements analyzed by Aristotle are primarily economic.

He begins his analysis of the *polis* by following, in part, the atomist tradition, contending that the proper mode of inquiry is to start with the simplest elements which combine together to make the whole.[11] However, he stays within the shadow of Platonic teleology by insisting that the whole or ultimate end of combinations is what gives meaning and character to constituent elements, so that they cannot be understood except in the context of the general system or ideal type.[12] He thus maintains (1253a14) that the *polis* "exists by nature" and that it is "prior to the individual,"[13] although it grows out of the combination of individual units. It is important to take cognizance of this ambivalence between the macro- and micro-elements of his analysis.

The primary elements of the functioning family, according to Aristotle, are male and female, master and slave, and parent and child. These constitute the basic social compound, the agrarian unit of production, the household or *oikos*. It is based upon the natural, symbiotic needs of the different elements, one for another: the male and female who cannot function separately; the master who needs assistance and the slave who needs supervision; parents who desire to leave offspring and children who need care and nurture.[14] These basic reciprocal needs result in the family unit which functions to produce the necessaries of life, "goods of the body," as they are called in Book VII of the *Politics*. In giving full import to Aristotle's emphasis upon the naturalness of this compounding of interlocking desires or needs ("demands," if one prefers) for each other's services, it is important to draw attention to Ernest Barker's qualification of the use of the concept "natural" or "nature" in translating the word *physis*, which, rather than meaning natural only in the sense of primitive, pure, or culturally uncontaminated, carries the connotation of growth

and process, with an emphasis upon the dynamics of the physical world.[15] Aristotle reinforces this thesis of the mutual affinity of the minimum elements of the politico-economic process by drawing on Plato's doctrine of natural specialization, suggesting that nature perfects things for only one use, unlike "smiths do when they make the Delphic knife to serve a number of purposes" (1252b).[16] This specialization requires the different elements which need each other to form combinations—to be drawn together in "associations."

The household is thus an aggregate of individuals with natural, mutual demands upon one another. These reciprocal tensions result in a natural compound, the basic self-sufficient agricultural unit of production, which provides "goods of the body," the necessaries of life.[17] This unit also provides a structure for the primary functions of marriage, slave supervision, and child rearing. A society providing only "goods of the body" resembles the one with a simple, natural standard of living in Plato's *Republic*, though characterized there, in the absence of any additional improvements, as "a society of pigs."

The village, as Aristotle points out, is an aggregation of households; its natural function is to provide more goods (1252b). In Book VII (1323a) these are characterized as "external goods," products which contribute to a desirable standard of living above and beyond the basic necessities of survival. They result from specialization and the barter process within the village, which is an outgrowth of mutual need for one another's goods and skills. The aggregation of villages into larger compounds or *poleis* permits not only economic self-sufficiency but also the production of psychic goods or "goods of the soul."[18] Psychic goods represent the cultural potential of the *polis* and the contemplative life, the summum bonum made possible by the satisfaction of more basic needs. This aggregation for Aristotle is the optimum or end of the social process. He therefore answers his own question with the conclusion (1323b–1324a) that "the best way of life for individuals severally as well as for states collectively, is the life of goodness duly equipped with such a store of requisites . . . as makes it possible to share in the activities of goodness."

This assertion is made in the context of an argument that the ideal life coincides with the ideal state because it provides the material support for ethical and moral standards. The general thesis that there is no fallacy of composition between the interests of the individual and the interests of the community is reiterated (1324a) when Aristotle points out that even those who hold different value systems (i.e., emphasizing wealth or power rather than goodness) also hold that the interests of the individual and those of the state coincide. This point underscores the generality of his system.

Needs: Limited and Unlimited

In order to put Aristotle's demand theory into perspective, it is necessary to clarify his concept of want satisfaction. The simplest elements of the economy are the various kinds of individuals with "natural" or physical needs who are drawn into household units in order to satisfy their requirements for "goods of the body." In this "first form of association," Aristotle says (1257a), "there is no purpose to be served by the art of exchange." At a second level of association, families aggregate into villages to engage in barter to satisfy their needs or demands for "external goods." At this level of association, useful things are exchanged for other useful things, but no money is involved. "When used in this way," he explains (1257a), "the art of exchange is not contrary to nature." He builds a theory which aggregates human associations into successively larger structural units, culminating in the *polis* or city-state. Only at this level are psychic values ("goods of the soul") and self-sufficiency possible. Aristotle's theory of natural physical need expressed as demand by each social unit thus culminates in a natural "best" independent community entirely consistent with all its parts. Although his ideal *polis* is teleologically prior to its parts, he nevertheless keeps a door open to the more general application of this system to other value orientations, observing (1323a) that "we may thus expect that—unless something unexpected happens—the best way of life will go together with the best constitution possible in the circumstances of the case."

Although the demands for goods in Aristotle's system are ordinally sequential in that there is no desire for external goods until basic needs are satisfied and no desire for psychic goods until a standard of living is achieved that will support leisure and liberality, the value or importance of these goods is in inverse order to their sequence of need. Problems begin to arise, Aristotle says (1323a), when the questions are asked, "How much of each good should men have? And what is the relative superiority of one good over another?" Moreover, although he insists that "*all* of these 'goods' should belong to the happy man," the need for external goods (their utility) is not without limit. He continues (1323b): "External goods, like all other instruments, have a necessary limit of size. Indeed all things of utility . . . are of this character; and any excessive amount of such things must either cause its possessor some injury, or, at any rate, bring him no benefit."[19]

This formulation of diminishing marginal utility is specifically extended to the instruments required in the production process in Book I (1256b) of the *Politics*. Aristotle there defines wealth as "a number of instruments used in a household or state" and observes that such instruments "are limited, both in number and size, by the requirements of the art they serve."[20] This suggests a

Table 1 The tripartite structure of Aristotle's political economy

The Household	The Village	The *Polis* or City-State
1. Basic agricultural production unit	Basic unit of exchange	Basic cultural unit
2. Goods of the body	External goods	Psychic goods, "goods of the soul"
3. Natural affinity of male-female, master-slave, parent-child	Natural affinity of households	Natural affinity of villages
4. Slave labor	Craftsmen and hired labor	Free citizens as statesmen
5. Naturally limited utility	Naturally limited utility	Unlimited utility
6. First ordinal priority	Second ordinal priority	Ultimate ordinal state or end
7. Lowest order of good	Intermediate order of good	Highest order of good
8. Production for direct consumption	Exchange activity with barter and commodities-money-commodities	Economic self-sufficiency and cultural interchange
9. Desire for goods of the body subject to natural limit	Naturally limited exchange of goods through barter and commodity-money-commodity exchange	Unlimited pursuit of wealth through money-commodity-money exchange

concept of marginal productivity similar to Xenophon's reference to efficient combinations of factors of production in the *Ways and Means*, discussed in Chapter III.[21]

The desire for or utility of psychic goods ("goods of the soul"), on the other hand, is just the opposite. "The greater the amount of each of the goods of the soul," Aristotle says (1323b), "the greater is its utility." Psychic goods, unlike "goods of the body" and "external goods" are thus not subject to diminishing returns, having unlimited utility.

Aristotle's conception of the development of the city-state is illustrated in Table 1. It reflects a hierarchy both of value and of self-sufficiency as economic relations broaden and the ordinal satisfaction of needs is provided in turn by household, village, and *polis*.[22] Although the highest order of value is attainable only with the development of the *polis*, the first and most basic order of need is satisfied by the initial unit, the household, with its provision of the requirements for survival. Aristotle's tripartite division of various aspects of the political and economic development of the *polis* corresponds to the

similar tripartite division of the soul in Plato's *Republic* (IV.435–42). The characteristics associated with the *polis* in the table illustrate the elements of the mature, self-sufficient city-state.

Aristotle's sequence of ordinal needs or demands, illustrated in Figure 3, are preconditions to higher standards of living (and, ultimately, self-sufficiency), and imply a theory of elasticity of need or utility. The desire for goods of the body (A) rapidly falls off as basic needs are satisfied (they have diminishing marginal utility), and is replaced by a desire for external goods (B). The desire for external goods, in turn, declines as reasonable needs are satisfied and is replaced by an unlimited desire for psychic goods (C). No man could be happy, Aristotle thought, "who abstained from none of the extremest forms of extravagance whenever he felt hungry or thirsty; who would ruin his dearest friends for the sake of a farthing" (1323a). Such unrestrained desire for excessive external goods is illustrated by curve D.[23]

The restraint placed on the desire for the satisfaction of bodily needs by the limitations of man's physical capacities, illustrated by Aristotle's "goods of the body," has come to be known as "Engel's Law" in modern economic theory, based on the writings of the German statistician and economist Ernst Engel (1821–1896), who theorized that expenditure on food is a decreasing function of income. The idea, however, originated neither with Engel nor with Adam Smith, who also incorporated the idea into his writings. It must have had wide currency in Greek thought, for Cyrus claims in Xenophon's *Cyropaedia* (VIII.ii.20) that people who have "acquired more than a sufficiency" find the excess a burden because, he explains, "they never eat more than they can hold, for they would burst if they did, and they never wear more than they can carry, for they would be suffocated if they did." Cyrus remarks that, unlike others with such an excess who "bury some of their treasure and allow some to decay" and "weary themselves with counting, measuring, weighing, airing, and watching," he himself uses his surplus to buttress his social position by using it to satisfy his friends, thus investing in the unlimited category of "security and good fame—possessions that never decay or do injury from overloading the recipient" (do not have diminishing utility). Cyrus's comments make strikingly clear the nonmarket mentality of those ancient Greeks who thought primarily in terms of success based upon the accumulation of wealth and not of its market potential. When Greeks such as Xenophon did think in terms of investment, it was often in terms of civic status.

In his *Theory of Moral Sentiments* Adam Smith advanced the idea of a natural limit controlling the physical appetites of the rich, observing that the rich "consume little more than the poor." Although he also recognized their "natural selfishness and rapacity," he felt that social opinion, personified in his

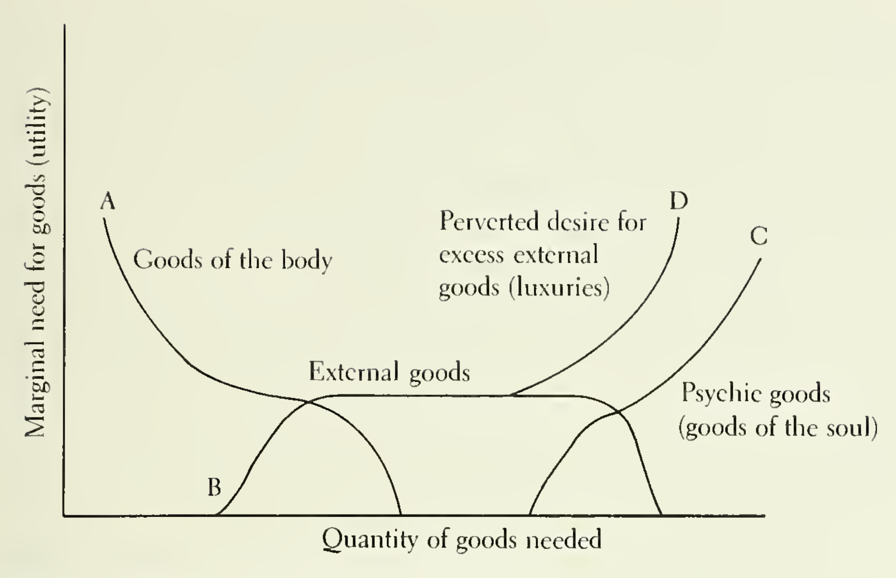


Figure 3 Aristotle's ordinal categories of demand.

"impartial spectator," would provide the necessary control.[24] Moreover, the "invisible hand," which was to provide such a felicitous mechanism for reconciling selfish individual interests with the public interest in the *Wealth of Nations*, was also used in the *Moral Sentiments* to turn the tide of greed to the public benefit by directing an equitable distribution of the "necessaries of life." Although the rich, he wrote in the *Moral Sentiments*, "mean only their own conveniency, though the sole end which they propose from the labours of all the thousands whom they employ, be the gratification of their own vain and insatiable desires, they divide with the poor the produce of all their improvements. They are led by an invisible hand to make nearly the same distribution of the necessaries of life, which would have been made, had the earth been divided into equal portions among all its inhabitants; and thus, without intending it, without knowing it, advance the interest of the society and afford means to the multiplication of the species."[25] In Smith's system in the *Moral Sentiments*, as in Aristotle's, distribution was thus a matter internal to the economy of the individual household, not a result of the operation of market forces.

In the *Wealth of Nations*, Smith retained the idea of a natural physical limit on need or demand for what Aristotle called "goods of the body," saying that the "rich man consumes no more food than his poor neighbor," and that the "desire of food is limited in every man by the narrow capacity of the human stomach." However, he saw no such limit operating in the desire for what Aristotle called "external goods," commenting that "the desire of the conve-

niences and ornaments of building, dress, equipage, and household furniture, seems to have no limit or certain boundary." In fact, he suggested that exchange originated in such desire. "Those . . . who have the command of more food than they themselves can consume," he wrote, "are always willing to exchange the surplus, or, what is the same thing, the price of it, for gratification of this other kind."[26]

When he discussed need or demand, Aristotle had in mind the self-sufficient, extended household (*oikos*) in a semi-subsistence agricultural economy where production is primarily for use (not exchange), and is governed by a pattern of specific needs or utilities; the market serves here as merely an adjunct where surpluses are exchanged to satisfy incremental needs. Economic anthropologists have had opportunities to actually observe the kind of economy Aristotle described, in which production is for use value rather than exchange value. In the former the objective is finite, while the goal of the latter, as mentioned by Marshall D. Sahlins, is always "as much as possible." In this connection, Sahlins's description of a "traditional economy of finite objectives . . . asserting itself even as it is broken and harnessed to the market" reveals why it has not always been easy to force native peoples into "shouldering the white man's burden." "Recruited as plantation hands," Sahlins says, workers "frequently showed themselves unwilling to work steadily. Induced to raise a cash crop, they would not react 'appropriately' to market changes: as they were interested mainly in acquiring specific items of consumption, they produced that much less when crop prices rose, and that much more when prices fell off."[27]

Thus, when Schumpeter asserts that Aristotle did not have a theory of distribution,[28] he is forcing an anachronistic problem upon Aristotle's analysis. The modern theory of distribution assumes an economy where most production is not for direct use, but instead is for exchange in a market. It further assumes that needs are satisfied primarily by purchase (not production) and that the flow of funds must be distributed through a market to support the production process. For Aristotle, however, the distribution of the benefits of production was an administrative decision to be made by the head of the *oikos*, directed toward the satisfaction of the sequence of marginal utilities pictured in Figure 3, with the acquisition of psychic values and the achievement of human happiness the ultimate end with the highest claim for support. His theory of distribution was concerned with the internal economy of the *oikos*, in which production for consumption was to be limited by need, with market exchange only a peripheral consideration. Such a theory, with its idealization of an agrarian gentry, might appear to have been unrealistic even in Aristotle's own day, especially in commercial cities such as Athens and Cor-

inth, but the outlook was not soon to fade away. Even Adam Smith in the *Wealth of Nations*[29] conceded that the maxim that "consumption is the sole end and purpose of all production" is "so perfectly self-evident that it would be absurd to attempt to prove it." Andrew W. Foshee claims that "the model of agrarian political economy established in classical antiquity and transmitted through the classical republican tradition to nineteenth-century Virginia continued to influence Southern economic thought well into this century."[30]

Exchange: Necessary and Unnecessary

Aristotle's analysis of exchange in the *Politics* (1256b40–1258a20) has generally been discussed without close reference to his treatment of the same subject in Book V of the *Ethics* or to his theory of ordinal demand and utility just reviewed.[31] Economists who have studied Aristotle's writings, as well as the classicists they have influenced, have generally construed Aristotle's dictum in the *Politics* (1257a15–20) that "retail trade is not naturally a part of the art of acquisition" as a moralistic repudiation of all commercial activity. This interpretation has tended to disseminate the notion that Aristotle never developed an analytical formulation of the commercial process, but rather limited himself to ethical prescriptions and descriptions of administrative policies. Schumpeter, for example, asserts that Aristotle "was primarily concerned with the 'natural' and the 'just' as seen from the standpoint of his ideal of the good and virtuous life,"[32] although he does acknowledge Aristotle's contributions in the areas of value theory, interest, and money. "Aristotle's theory of money," he writes, "is the basis of the bulk of all analytic work in the field."[33] Finley contends that "nowhere in the *Politics* does Aristotle ever consider the rules or mechanics of commercial exchange" and that "his insistence on the unnaturalness of commercial gain rules out the possibility of such a discussion." He finds "not a trace" of economic analysis in the *Politics*.[34]

It cannot easily be denied that there is a clearly reasoned analysis of economic relations in the *Politics*. Eric Roll noted that Aristotle's "analysis of the principles of a society in transition from agricultural self-sufficiency to trade and commerce . . . remained unsurpassed for centuries."[35] All that is required to understand the elements of Aristotle's theoretical sketch of the problems inherent in retail trade is that the material be read with careful attention to the logical coherence so typical of Aristotle and without the naturalistic bias of nineteenth-century market theory which most economists have brought to their interpretations of it.[36]

First, "retail trade is not naturally a part of the art of acquisition." This statement is clearly explained to mean that items produced for human use

properly fit into the natural scheme of things only when used for the purpose for which they are intended. "All articles of property," Aristotle asserts, "have two possible uses." One use, he says, "is proper and peculiar to the article concerned; the other is not." He illustrates his meaning with a shoe, which may be used both for wearing and for exchange. Its natural use is to be worn, but, he says, "even the man who exchanges a shoe, in return for money or food, with a person who needs the article, is using the shoe as a shoe." Barter and also money exchange are thus "necessary" forms of acquisition when undertaken "to satisfy the natural requirements of sufficiency." Aristotle points out that exchange arises in the first place "from the natural facts of the case, and is due to some men having more, and others less, than suffices for their needs." His theory of exchange is thus based on the objective of mutual need satisfaction which, as he develops in *Ethics* V, is the factor that binds a community together. Sir Alexander Grant called the recognition of this principle "the first dawning of political economy."[37]

In Aristotle's *polis*, nearly self-sufficient households are the functional basis of economic life. A reciprocal pattern of complementary surpluses and shortages results from variations in needs and the means for their satisfaction, so that A, long on shoes and short on food, finds it convenient to trade with B, who is reciprocally long on food and short on shoes. Any surplus resulting from the benefits of exchange beyond the natural needs for survival, Aristotle believed, rightfully belonged to "the offspring" (posterity) and not to an intermediary in the exchange process (1256b10, 1258a35).[38]

Where barter exchange occurs, goods move directly from the producer to the consumer. Aristotle associates with household management the "necessary" form of acquisition through exchange. It is, he says, "subject to definite bounds." This "necessary" form of exchange, characterized by barter, C-C′ (commodities for commodities), is "subject to definite bounds" because of the natural, self-limiting, ordinal structure of needs and the diminishing utility of goods. Even exchange with money as a medium is "necessary" when it is for the acquisition of goods to be used, i.e., C-M-C′ (commodities-money-commodities).

Aristotle sharply contrasts the "necessary" form of exchange with the "unnecessary" or "lower" form which is made possible by the use of money, e.g., M-C-M′ (money-commodities-money).[39] The end of this kind of exchange is not the satisfaction of need but the acquisition of money, which has no use in and of itself, as he illustrates by the Midas legend. This form of acquisition, Aristotle says, has "no limit to the end it seeks." It "turn[s] on the power of currency" and thus is unrelated to the satisfaction of needs.

The "extreme example" of the "unnecessary" or "lower" form of exchange,

and the most hated, Aristotle says, is usury, which he considered a still greater perversion of the exchange process, for it attempts to "breed" money—"currency, the son of currency."[40] Usury "makes a profit from currency itself (M-M′-M″ [money-money-money]), instead of making it from the process which currency was meant to serve." He adds, "Of all the modes of acquisition, usury is the most unnatural," that is, furthest removed from any limitation by natural need. It could be argued that Aristotle's negative attitude toward this and other withdrawals from the "natural" economic process was an integral part of his broader view, discussed above, that all "surplus" should be earmarked for population expansion.[41]

Although Alan Samuel emphasizes the lack of a concept of economic growth or productivity in Greek writings generally, he sees in Aristotle's discussion of interest (1258b3 ff.) a distinction between the natural capacity of some investments to increase (e.g., sheep breeding) and the absence of this capacity in inanimate objects (e.g., a pair of shoes or money) which is the basis for Aristotle's condemnation of interest.[42] He does not seem to recognize, however, that this is in fact the beginning of an understanding of productive investment and a physiocratic theory of economic growth.

Aristotle's classification of exchange into "necessary" and "unnecessary" forms was not a simple moral rejection of the commercial process. It represents, instead, a reasoned explanation that some forms of exchange are not subject to the natural pattern of restraint upon acquisition which results from the satisfaction of the needs of the household and the operation of the principle of the diminishing utility of goods. Trade *limited by natural need* Aristotle regarded as a use of goods consistent with economic well-being, although he did not consider trade per se as natural. Even acquisition by exchanging goods for money to facilitate the flexible use of the barter potential of one's commodities, since it is *limited by the objective of satisfying needs or wants*, was "naturally a part of the art of household management."

Aristotle traces the origin of the "unnecessary" form of exchange as well as the invention of coined money to the development of foreign trade (trade between city-states). "The supply of men's needs," he says (1257a), "came to depend on more foreign sources, as men began to import for themselves what they lacked, and to export what they had in superabundance." As this form of exchange is unrestrained by any natural system of regulation, Aristotle cautions later (1327a) that "states which make themselves marts for the world only do it for the sake of revenue; and if a state ought not to indulge in this sort of profit-making, it follows that it ought not to be an exchange centre of that kind."

The diversion of goods from their natural purpose by middlemen was made possible by the use of freely circulating money. With the introduction of

money exchange between the producer-consumer and the middleman or retail trader, the accumulation of coined money by the retailer became possible. The motivation for exchange in this system is also not limited by the natural satiation or desire for goods which in Aristotle's *polis* regulates the consumer and, by implication, the producer.[43]

Aristotle's Monetary Theory

Aristotle's theory of money developed in the *Ethics* and *Politics* coincides so closely with the later recognized functions of money in a market economy that his analysis dominated thought in this area into the nineteenth century.[44]

In the *Ethics* (1133a15–30), he points out that "money has become by convention a sort of representative of demand; and this is why it has the name 'money'—because it exists not only by nature but by law and it is in our power to change it and make it useless." Further (1133b15): "Money . . . acting as a measure, makes goods commensurate and equates them." He recognized the function of money as a store of value with the statement (1133b10) that "if we do not need a thing now we shall have it if ever we do need it—money is as it were our surety; for it must be possible for us to get what we want by bringing the money." In the *Politics* (1257a), in a historical context, he refers to the portability of money and adds, "men therefore agreed, for the purpose of their exchanges, to give and receive some commodity which itself belonged to the category of useful things and possessed the advantage of being easily handled for the purpose of getting the necessities of life." He suggests that commodities such as iron, silver, and other metals of stable value are usually selected, but it is clear that he viewed coinage as a convention of law subject to being made "useless" as money.

Schumpeter[45] points out that, in his brief comments on money, Aristotle covered three of the four functions of money (as a medium of exchange, measure of value, and store of value) recognized in nineteenth-century economic theory. Only a fourth, to serve as a standard of deferred payments, he notes, was missing. It could be argued, however, that Aristotle's treatment of usury in the *Politics* (1258b) includes ample recognition of money as a contractual standard of deferred payment.

Schumpeter took definite positions on two topics to which some subsequent attention has been given. On the question of interest or usury, he flatly denied any analytic contribution on Aristotle's part. On the more controversial issue of money, he took a strong position that Aristotle was a metallist, interpreting his statement that money is subject to legal norms as meaning merely that the specific commodity selected as the monetary medium is the subject of arbi-

trary legislative decision. Despite the widespread acceptance of subjective relativism in the fourth century B.C., he insisted that Aristotle held a bullionist or commodity theory of money. This view has been effectively challenged by Barry Gordon.[46] It is strange that Schumpeter should have taken such a dogmatic view of Aristotle's monetary ideas, considering his recognition of Plato's "cartal" theory of money. In the *Laws* (742a–b), Plato specified that a totally fiat system of money "of value at home but worthless abroad" should be used in his model city for domestic exchange to help insulate the populace from intercourse with foreigners. For unavoidable contacts with aliens, such as "campaigns and foreign expeditions," a "common Hellenic currency" was to be used.

In any event, Aristotle's monetary theory was thought to have been a fiat one by some nineteenth-century British political economists, as illustrated by Nassau Senior's criticism of Aristotle for *not* being a bullionist. Regarding value, he said, "Aristotle's description of value as depending on demand approaches much more nearly perfect accuracy than Smith's, who, by adopting labour as a measure of value and talking of labour as never varying in its own value, has involved himself and his followers in inextricable confusion." Senior added that "the only point in which Aristotle seems to me to have been mistaken is in supposing . . . that money may owe not only its currency, but also its value to convention."[47] Senior thus attributed to Aristotle an understanding of the fiat nature of money, but he insisted that a commodity base would have been necessary for its development.

Cantillon, however, in his *Essai sur la nature du commerce en général* (I.xvii) published in 1755, had noted that the Spartan monetary system *did* operate, at least for a time, without such a base when Lycurgus introduced an iron money tainted with vinegar. He pointed out that, by destroying the utility of the iron, the Spartans had simply guaranteed that their money would not circulate outside Sparta. He was under the misapprehension that foreigners could counterfeit the iron money and thus buy Spartan goods cheaply, but he failed to understand that this had been anticipated by making the money trade at a value lower than the commodity value of iron.

Cantillon cited no source for his information, but it was apparently taken from Plutarch's description (*Lives*, I; *Lycurgus*, VIII–X) of the iron money Lycurgus introduced to reduce the "dreadful inequality" among the Spartan people. It had been quenched with vinegar to make the iron "useless for any other purpose." Plutarch's account of the affair is a clear description of the deliberate use of monetary policy to influence the distribution of wealth, to eliminate the production and importation of luxury goods, and to promote the manufacture of utilitarian products for the common people. He records

that at this time "the city was heavily burdened with indigent and helpless people" because the "wealth was wholly concentrated in the hands of a few." Lycurgus, whose power of persuasion must have been very great, managed to convince his fellow citizens to accede to a total redistribution of the land. This accomplished, he next sought "to divide up their movable property" to effect the removal of "every vestige of unevenness and inequality." When the propertied citizens balked at this proposal, he "took another course, and overcame their avarice by political devices." Gold and silver money were withdrawn from circulation and the tainted iron money declared the only legal tender. Further, by assigning so "trifling" a value to a great weight of the iron money that "a large store-room" was required to keep "ten minas' worth" and a "yoke of cattle" to transport it, the money lost its currency abroad and the market for luxuries was destroyed. The following is Plutarch's colorful description of the effectiveness of this monetary policy. "No merchant-seaman," he wrote, "brought freight into their harbours; no rhetoric teacher set foot on Laconian soil, no vagabond soothsayer, no keeper of harlots, no gold- or silver-smith, since there was no money there." Luxury, he reported, "gradually deprived of that which stimulated and supported it, died away." Thus it came about that Spartan artisans, "freed . . . from useless tasks," produced "common and necessary utensils" of such excellent quality that they gained "high repute" everywhere. The Laconian *kothon* or drinking cup was especially popular among soldiers because its color "concealed the disagreeable appearance of the water . . . they were often compelled to drink, and its curving lips caught the muddy sediment and held it inside, so that only the purer part reached the mouth of the drinker."

Plutarch's account, available in English as early as 1579 in Sir Thomas North's translation, is one of the more specific illustrations of the ancient Greeks' understanding of the use of money to allocate resources and to effect redistributions of wealth. Many other examples could be cited. The [Pseudo-] Aristotelian *Oeconomica*, which, as noted in Chapter III was widely read in Renaissance Europe, contains various anecdotal references to fiat money systems, including the minting of tin (II.2, 1349a30–35) and bronze (II.2, 1350a20–25) coins that traded by law on a par with silver.

In the [Pseudo-] Platonic *Eryxias* are found the most unequivocal statements of the cultural relativity of the choice of monetary media and specific accounts of the dependence of internal currencies on the force of law. A Carthaginian "money" is mentioned (399–400) which consisted of an object, known only to the makers, "about the size of a stater" which was tied up in a small piece of leather, upon which a seal was set. It is observed that if anyone

outside Carthage had such "money," he "would be no wealthier than if he had so many pebbles from the mountain."

A half century before Aristotle wrote, a law was passed in 375–74 B.C. authorizing market officials to certify both Attic and foreign coins with Attic marks "as legal tender and to be accepted by merchants operating both in the city and in the Peiraieus,"[48] an illustration that the concept of legal tender was well understood by the Athenians.

In Aristophanes' *Ecclesiazusae* (815–25), reference is made to an incident where, after a man has sold his grapes for copper coins, he is interrupted, as he purchases barley, by a herald announcing the suspension of the copper coinage and its replacement with silver. In the *Frogs* (719–34), Aristophanes compares the way the city deals with "the very best and noblest members of her commonweal" with its "ancient coinage." Just as the city treats her "sterling townsmen" with "scorn and insult," preferring instead "strangers newliest come," so it also prefers the "worthless pinchbeck coins of yesterday" to the old "sterling pieces, all of pure Athenian mould." This is frequently cited as an anticipation of Gresham's Law that bad money drives out good. It is, however, raised in the context of a complaint against an administrative policy and is not an observation on a natural monetary process. The incident refers to a time during the Peloponnesian War when the supply of silver was limited.[49]

A tantalizing allusion to the functional quantity of money occurs in the *Anonymus Iamblichi*,[50] where the assertion is made that a breakdown of law and order results in the hoarding of money "because of the lack of mutual trust and the lack of common dealings." When this happens, "money becomes scarce, even if it exists in large quantities." The velocity of money, that is, the speed at which it circulates, and therefore its effective quantity, it is suggested, are a function of political stability. Such a dynamic view of circulation is not at all out of context with Heraclitean notions of natural process,[51] but such views appear not to have been extended to any theory of market process. The closest thing in that direction is Aristophanes' personification of "Poverty" (*Plutus* 518–33) as a motive force stimulating the productive process, but this is not in a monetary context.

Aristotle clearly associated the origin of coined money with foreign trade (*Pol.* 1256a), where, at least in the early period, money, even as coins, moved primarily as an export commodity in the form of minted bullion. This was particularly true of the silver used in the grain trade in Egypt, where there is evidence that the Egyptians routinely broke and scored the coins to protect against fraud, and ultimately melted them down for their silver content.[52] Peter Koslowski[53] has pointed out that coined money as a medium for the ac-

cumulation of wealth was also important to the agrarian economy of the late fourth century B.C. and that its use may reflect the bullionist attitudes of an agrarian aristocracy who wished to accumulate reserves of value in the form of coined money during periods of uncertain political and economic conditions. Moreover, it is likely that the role of the Athenian state in making regular distributions of money to the populace[54] contributed to a different attitude toward the circulation of coinage within the *polis*, where its fiat value dominated, from that which evolved in foreign trade.

The ultimate cynicism with which the Greeks approached coined money, however, is illustrated by the discovery of "coins" contributed as offerings to the god Poseidon near Corinth which were made to imitate standard issues by coating either base metal or clay with a thin layer of silver.[55] It has been suggested that one of the origins of coinage was the formal minting of bullion for votive offerings in the temples, but only a purely fiat or formal obligation to the gods could have been satisfied by such counterfeiting. At any rate, it is clear from these few references that the conception of fiat money without regard to its commodity value was a commonplace in Aristotle's time.

Homo Oeconomicus and *Homo Chrematisticus*

It was coined money which Aristotle believed permitted the development of "unnecessary" exchange. Unlike exchange limited by the needs of the household, the "unnecessary" kind of exchange has no natural limit and thus, in Aristotle's view, poses a threat to economic stability. To illustrate the digressive potential of money in the "unnecessary" or "retail form" of exchange, assume that A sells a bushel of grain to a retailer for three drachmae and that the retailer sells the same bushel of grain to B for four drachmae. Assume further that B sells an amphora of wine to the retailer for three drachmae, which the retailer in turn sells to A for four drachmae. The natural barter process has been served by these transactions, but the retailer has picked up two drachmae. The bargains between A and B and the retailer would be prima facie fair if freely and voluntarily entered into under the Greek law of sale.[56] However, the retailer's motivation in the exchange is directed toward the accumulation of money, and his avarice is limited neither by his own needs nor his costs. His acquisitiveness, therefore, is not constrained, as is the consumer's, by the diminishing marginal utility of goods. It has not been easy for modern commentators to grasp Aristotle's distinction between "unnecessary" exchange and that limited by diminishing marginal utility because the ancient Greek vice of *pleonexia* (acquisitiveness)—translated less pejoratively by J. S. Mill as simply

"wanting more than one's share"[57]—has become almost a virtue, the exercise of self-interest, in modern economic theory.

What, then, is to prevent the retailer from using the exchange process to acquire excess wealth in the form of coined money? Aristotle obviously did not assume a reasonable knowledge of market conditions on the part of consumers or sellers of goods that would serve to limit the amount of money they would be willing to pay or accept in transactions with retailers. In the absence of a natural limit imposed by the use value of commodities, the retailer would be able to take advantage of the secondary (nonnatural) exchange use of goods for the unlimited pursuit of money wealth. This also happens when a city makes itself an "emporium" or "mart" (a middleman in international trade) which, as mentioned above, Aristotle also decried (*Pol.* 1327a). Money-making of this sort by either the individual retailer or the city Aristotle designates as *chrematistics*, as distinguished from *oikonomia*, which is "a natural art of acquisition which has to be practised by managers of households and statesmen" (*Pol.* 1256b). As long as goods are used for their natural purposes, natural satiation limits their accumulation. Retail trade, however, sets up the conditions for the secondary use of goods as items of exchange for money as an end in itself, and, in Aristotle's system, would require administrative restraint or artificially imposed limits in the absence of any natural restriction.

In other words, the whole profit-motivated market process which we now call the "economy" was regarded by Aristotle as *chrematistics* and *external* to his *oikonomia*. *His* political economy was directed to an analysis of the management and satisfaction of the needs of the household and state and not to the study of a market oriented toward profit maximization.[58] A. Anikin[59] expressed this paradox very well. "For Aristotle," he wrote, "the expression *homo oeconomicus* would have meant the exact opposite, a man who seeks to satisfy his reasonable needs which are by no means limitless. This hypothetical figure without flesh and blood, the hero of economic works in Smith's day, he would probably have called *homo chrematisticus*."

Aristotle's failure to recognize the operation of any pattern of market forces which regulate trade is illustrated by his discussion of monopoly. In the *Politics* (1259a) he mentions two incidents of monopolies which, he remarks, might be included in a collection "about the ways in which different people have succeeded in making a fortune." He recounts the experience of a man in Sicily who bought up all the iron in the community and then sold it at a moderate increase in price, doubling his money in the process. Dionysius, the ruler of Syracuse, ordered the man to leave the city, but allowed him to take his profits. The story of Thales of Miletus is also recalled. Thales, tiring of

being ridiculed for engaging in unprofitable philosophical pursuits, anticipated a heavy olive crop and quietly took up leases upon all the olive presses in the region so that he could charge what he wished when the crop came in, thereby demonstrating his ability to make money if he wished. Aristotle concludes that Thales not only "proved his own wisdom" but also demonstrated by "the creation of a monopoly . . . a principle which can be generally applied in the art of acquisition." He adds that "a knowledge of these methods is useful to statesmen as well [as private persons]," and suggests that monopoly may be appropriate for public fund raising. He thus seemed to view monopoly simply as an expression of the leeway available to individuals or states because of the use of money rather than as a perversion of "normal" market processes.

The Natural Limit

In his commentary on Aristotle's *Politics*, W. L. Newman[60] discusses Aristotle's attempt to counterpose the unlimited desire for the aggregation of wealth in the form of money with the constraining limit of natural use, but he seems to lose the thread of Aristotle's argument regarding the importance of a natural limit.[61] He defends the profit of the retailer (the "intermediary") as "payment for a social service, not something filched from his neighbour," citing Plato (*Laws* 918b–c) for a "truer way" of construing this social function. The question of whether the retailer has valid expenses which deserve reimbursement is, however, irrelevant to the basic issue of whether there are natural restraints, such as satiable physiological desires, upon his interest in accumulating money above and beyond any reasonable payment for services. Part of the problem is that Newman associates the natural limit with a concept of virtue deduced from the hypothetical good life. He is conscious of some inconsistencies in Aristotle's views, as he interprets them, but he fails to explore the possibility that Aristotle's explanation of the limits on social and economic activity was in naturalistic and materialist rather than in moral terms. One might even say that the careful development in the *Politics* of the physiological preconditions for family and village organization has a distinctly atomist flavor.[62] Henry W. Spiegel, on the other hand, clearly recognizes the importance of Aristotle's emphasis on use value as a natural limit in exchange.[63]

There is evidence that the question of the existence of natural limits to human desire and the need for legislative regulation in their absence was a well-developed issue in ancient economic policy. Indeed, as Vlastos[64] clearly demonstrates, the concept of a "proper limit" was an underlying assumption of all ancient Greek cosmological and scientific thought. The issue is elaborated in abstract terms in Plato's *Gorgias* (493–94), where containers are used as an

analogy in a discussion of natural limit. Aristotle quoted from one of Solon's poems, "There is no bound to wealth stands fixed for man." He disagreed,[65] and asserted that "there *is* a boundary fixed, as is also the case in the means required by the other arts" (1256b30–35).[66] Elsewhere (1266b15–20) he noted that the laws of Solon had coped with the problem by setting limits on the acquisition of land. As long as money is sought only for the purpose of buying goods to be used, the constraint of diminishing marginal utility insures that a natural limit will operate. The acquisition of money for purposes of self-sufficiency[67] was not rejected by Aristotle as a valid pursuit of the household manager. The desires of the retailer, however, which are not tied to the ultimate consumption of his acquisitions (namely coin), are subject to no such limit. Aristophanes[68] made the point more humorously:

> . . . give a man a sum of thirteen talents,
> And all the more he hungers for sixteen;
> Give him sixteen, and he must needs have forty,
> Or life's not worth his living, so he says.

Aristotle's elaboration of a "natural limit" in political and economic life represents both a rigorous logical and a traditional scientific concern over stability and justice. J.-P. Vernant[69] summarized the Greek view incisively. "Ultimately," he writes, "wealth has no object but itself. Created to satisfy the needs of life, as a mere means of subsistence, it becomes its own end, a universal, insatiable, boundless craving that nothing will ever be able to assuage." Logically, if one element in an equilibrated or counterposed system is unlimited, boundless, or fraught with infinite potential, it will necessarily overwhelm the other elements, sooner or later. Aristotle did not entertain the notion of counterposed, infinite potentialities in mutually restraining equilibrium.[70] Such a perfect equilibrium could only be maintained by some manipulating administrative force, such as an "invisible hand."

Historically, the idea of the necessity of a natural limit operating to insure the stability of the forces of nature goes back to Anaximander and was restated by Aristotle in his *Physics* (204b24–29). Vlastos[71] suggests that the notion involves a concept of natural equality, but whether the equilibrium of contending components necessarily involves equality or merely a balance of varied elements in a stable mosaic is not crucial to the basic image of social process.[72]

What is clear is that Aristotle saw the participating elements of his *oikos*-oriented economy as stable precisely because they were self-limiting as a result of inherent diminishing utilities and limits upon desire, and this is why he opposed the "unlimited" or "unnecessary" form of exchange. In *chrematistics*, made possible by monetary exchange, there is no internal limiting factor, par-

ticularly when the practitioners involved are *metics*, resident alien Greeks largely unaffected by local traditions. In his system, stability and self-sufficiency are the assumed goals of economic and political life;[73] he opposed the unlimited kind of exchange, not on purely moral grounds as some have thought, but because he saw it as a threat to a stable economic life. Plutarch[74] put his finger on the ultimate logical contradiction in the desire to accumulate wealth in the form of money for its own sake and not for the purpose of satisfying needs, however defined, when he observed that a peculiarity of the love of money is that "it is a desire that opposes its own satisfaction." He illustrates the point with lines from Menander describing a lover who keeps the object of his affections locked in his house, yet refrains from any contact with her.

Both Plutarch's statement and Aristotle's attitude toward "unlimited" exchange make clear that the ancient Greeks had no effective concept of the productivity of money capital through investments, though, as discussed in earlier chapters, they were aware of the potentialities of physical capital (tools or instruments of production), as well as that of human capital. Economic growth or expansion, however, was not a conspicuous objective in the writings of either Aristotle or Plato; hence the idea of investing surplus funds for its achievement simply did not occur to them. Their interest was in self-sufficiency and stability, not in the financing of enterprises which might release the very forces they sought to contain. They tended to think that any surplus, either in goods or money (potential investment funds), should be allocated to the "offspring" and to the enhancement of psychic values or social position. Aristotle, referring to agriculture as the "soundest and properest form of acquisition" (*Pol.* 1258b), persisted in thinking that increases in production occur primarily as a result of natural processes, as in agriculture managed through the *oikos*, and not as the result of trade.[75]

The significance of Aristotle's *oikos*-oriented political economy, with its natural internal limit of diminishing utility, lies in its projection of an automatic, self-regulating mechanism to insure its stability, for an internal limit is necessary for the continuity of any system of contending forces, economic or otherwise, which will prevent any of its component elements from overwhelming the others. Only a self-limiting factor would give such a system the necessary prerequisite for stability and self-regulation. If there is no internal regulatory mechanism, then logically it will be necessary for an external force to manipulate or regulate the system to keep it stable, unless one grants the possibility of a perpetual, perfect equilibrium in two-party or multi-party relationships.

This is why a theory of limit was crucial to Adam Smith's explanation of the operation of a self-regulating market economy. Over the course of his life-

time, he advanced three different theories of natural constraints to support the existence of a self-regulating economy. Paralleling Aristotle's principle of diminishing utility, he asserted in the *Moral Sentiments*, as mentioned earlier, that the rich, despite their "natural rapacity," would be led to divide the produce of the earth equitably with the poor as a result of the physical limits of their consumption. Second, his concept of "human sympathy" expressed through the "impartial spectator," which follows closely Plato's development of the idea of an alter ego in the *Greater Hippias* (286c–298a, 304c–d) as well as Protagoras's principle of "fellow feeling," is a socially induced self-restraint similar to Plato's ethical hedonism.[76] Third, in the *Wealth of Nations*, Smith embraced the pure self-interest of Mandeville as the motivating force in economic relations, but he theorized that the only limit needed for the stability of the system, and its self-regulation, was an equilibrium of avarice, with the "invisible hand" nullifying the destructive tendencies of unrestrained greed by guiding individuals bent only on selfish gain, almost against their wills, to work for the public good. In order to avoid the logical dilemma of an equilibrium of potentially infinite forces, it was necessary to invoke the imagery of an external, metaphysical factor, the "invisible hand," to explain the self-regulative nature of the market system. This apparently seemed preferable to any other external regulatory device, especially government intervention.

The market economy, which had germinated and grown outside the confines of the feudal legal structure, had by Smith's day succeeded in partially asserting the rules of its own governance in the form of the Law Merchant, but it seemed necessary not only to justify the continued independence of what Smith claimed to be a self-regulating market sector, but also to demonstrate the positive harm which might result from interference in the form of royal prerogative and ill-advised legislation which might threaten the clocklike perfection of the system. Smith once compared human society to "a great, an immense machine, whose regular and harmonious movements produce a thousand agreeable effects,"[77] and he warned against interference with such mechanical perfection.

The necessity of explaining how contending and potentially infinite forces can maintain their own equilibrium has been a continuing problem for economists who wish to assert, like Smith, that a system of private production for an open market is naturally self-regulating and that any interference with its operation will only cause disequilibrium in an otherwise self-equilibrating system.[78] To provide such a limit, the neoclassicists seized upon the self-limiting element of increasing costs to scale as the factor which would restrain a potentially infinite expansion of competing firms.[79] In order, however, to account for a response to an increase in consumer demand by an increase in produc-

tion without an increase in costs, it was necessary for the neoclassicists to postulate freedom of entry by a potentially unlimited number of small, competing firms with costs similar to firms already in production, thus permitting horizontal or lateral expansion, not by an increase in the *size* of firms, but in their *numbers*, which, it was thought, would not disturb the overall equilibrium of the system. In the alternative, the assumption of *decreasing* costs would mean the lack of an internal limit and a consequent movement toward oligopoly and, eventually, monopoly, as cutthroat competition eliminated all but the strongest firm(s).

Two principles, that of rationality and that of diminishing utility, are common to both Aristotle's system and modern economic theory. Aristotle, however, placed the source of rationality in the individual (the inner psyche of the patriarchal head of the household and the statesman), for he found no expression of rational restraint nor any natural limit in the commercial world of "unlimited" or "unnecessary" exchange (*chrematistics*). In his system the rationality exercised by the head of the household and the statesman was the source, not only of efficiency in the economic process, but also (through ethical hedonism) of the moral restraint necessary to curb avarice. In modern economic theory, on the other hand, rationality is a result of the passionless interactions of the "natural" market process itself, which allocates and guides the productive forces in the economy. In Aristotle's system, diminishing utility was the limiting factor which guided production since, in the self-sufficient *oikos* where most production occurred, no one would produce objects that were not needed. Marginal utility and marginal productivity were thus synonymous. In modern economic theory, diminishing utility limits production only indirectly by limiting demand for consumption. Production, on the other hand, is a response to market opportunities, with the market process intervening between consumption and production.

The Social Economy

In Aristotle's day no concept of a natural market process seems to have been recognized, and the common practice among city-states, especially Athens, was to resort to public regulation to assure reasonable prices and profits while protecting flows of staples, such as corn (grain), upon which the people depended.[80] Marketplaces in ancient times may even have been an outgrowth, not of private economic activity, but of municipal regulation designating specific locations for commercial activities to facilitate tax collection and the control of the quality and price of products.[81] At any rate, as Andreades ob-

served, "The existence of the market . . . greatly facilitated the collection of internal revenue, and that of the *kykloi* made the collection of special taxes . . . a comparatively simple matter."[82]

Aristotle certainly viewed the market as a creature of the state. In discussing his ideal *polis*, he argued that "in order to procure supplies, it is imperative that a state should be able to import commodities which it does not itself produce, and to export, in return, the surplus of its own products." It should, he said, "act as a merchant for itself—but not as a merchant for others." That he clearly envisioned regulation of commercial activities is revealed by his plan to separate port activities from the town and his comment (*Pol.* 1327a) that "any disadvantage which may threaten can easily be met by legislation which states and defines the persons who may, or may not, have dealings with one another." He recognized (1321b18) that internal exchange holds a community together and provides "the readiest means for the attainment of self-sufficiency." It may have been for this reason that, among the "indispensable offices" given for the administration of a state, he lists first "the office charged with the care of the market-place."

Although we know that large quantities of goods were bought and sold in public markets, particularly in cities like Athens and Corinth which were dependent on imported food and other staples,[83] this is not to say that a market process functioned in ancient Greece to regulate the economy, as Smith believed it would in eighteenth-century England if market processes were left alone. In the grain trade, where a homogeneous product would lead one to expect a market to develop, if anywhere, in a fragmented economy, we are told by Demosthenes (XX.31–32) that half of the imported grain upon which Athens depended, some 600,000 bushels, was imported from the Black Sea and that a single *metic* and his family had control of this trade. Moreover, the highly individualized nature of bargaining and the lack of uniformity in many goods in ancient times made it easier to conceive of trade as an accumulation of separate transactions rather than as elements in a comprehensive, self-regulating market system. Such individualized market processes still characterize the handicraft economies of less-developed countries today.

Cyrus's famous reply to the Spartan herald, so often cited as a characterization of the Greeks as hard commercial bargainers, may, in fact, have been more a commentary on the system of public regulation. When warned to leave the Greek settlements on Asia Minor alone, Cyrus replied "I have never yet been afraid of men who have a special meeting place in the centre of their city, where they swear this and that and cheat each other." Although Herodotus (I.153) thought the remark "was intended by Cyrus as a criticism of the

Greeks generally, because they have markets for buying and selling, unlike the Persians who never buy in open market," it may have had as much to do with the system of public oaths used to establish value and quality of goods before market officials as with the trade associated with the agora. The remark would have been particularly inappropriate as a description of the Spartans, who were conspicuously noncommercial in their orientation.

The fact that much commercial activity in ancient Greece was in the hands of resident aliens, or *metics*, adds another dimension to the distinction between economic activities appropriate to the citizen heads of households and those characteristic of commercial exchange outside the pale of Aristotle's natural economy.[84] That Xenophon took for granted the position of the *metics* in the economy in his proposals in the *Ways and Means*, Finley considers significant. "What matters is the mentality revealed in this unique document," he writes, "a mentality which pushed to the extreme the notion that what we call the economy was properly the exclusive business of outsiders." As mentioned in Chapter III, and as Finley also notes, Xenophon's recommendations in the *Ways and Means* even included the positive promotion of *metic* activity. Finley takes John Hicks to task for questioning the Greeks' toleration of *metics* in the development of their economy.[85] "Hicks," he asserts, "seems to . . . have placed the accent exactly in the wrong place when he writes of the *metics*, 'what is remarkable is that there should have been a phase in which their *competition* is tolerated, or even welcomed, by those already established.'"[86] Xenophon's attitude, of course, was no different from Aristotle's.[87] They both took it for granted that the moneymaking activities of the *metics* were *external* to the business of the manager of the household and the *polis*. The commercial activities of the *metics* were seen by Aristotle and Xenophon, not as a process which functioned to regulate the economy automatically (as moneymaking activities are viewed by nineteenth-century economic theory), but as a process *to be regulated* so as not to impinge deleteriously upon the proper functioning of the *oikonomia* of the household and state.

It should be kept in mind, however, that the anticommercial perspectives of Xenophon and Aristotle, as well as of Plato, were basically conservative, traditional, and aristocratic in orientation and were not necessarily representative of late-fifth- and fourth-century Athens. Their attitude is probably reflected in Aristophanes' play, *The Knights*, which is a satire on the democracy. In it, the sausage seller is represented (218–41) as a typical Athenian citizen acceptable as a potential political leader because of his "brutal voice, low birth" and "agora training," a critical reference to the state of affairs to which Athens had been brought under the popular democracy. On the other hand, in the *Achar-*

nians (499–522), *metics* are specifically distinguished from "strangers" and referred to as the "civic bran" of the "clean-winnowed" audience.[88] Lionel Casson[89] found that members of the upper class in fourth-century B.C. Athens probably invested "the bulk of their money in land," but he records references to their engaging in every imaginable kind of economic activity, from milling and baking to the production of articles as diverse as furniture, cloaks, flutes, and pottery, usually in slave-manned workshops. Moreover, he cites evidence that the Athenian elite also found profit in leasing out slaves for hire, operating mining concessions, catering businesses and brothels, as well as tax farming enterprises. Only banking and shipowning, he observes, were left almost entirely to the *metics*.

Aristotle as an Economist

Aristotle's contribution to economic thought was on two levels: first, in his development of a system or overview of the politico-economic process in which stability and self-sufficiency were the primary goals and, second, in his analysis of specific economic phenomena, such as exchange, diminishing utility, and money. In his development of a system, he adapted Plato's ethical hedonism to serve as a guide to the acquisition of psychic values, the ultimate good in his *polis*. At the same time, he adapted what may have been a broader sophist concept of natural process to support his system with a tightly woven wickerwork of naturalistically defined two-party relationships. Probably his concept of a natural politico-economic system was the most influential of his contributions. The dominant medieval view of economic life was not far removed from the system described by Aristotle. In it, a divinely ordained king, a feudal nobility, and a clergy were supported by a manorial economy, and commerce, in the hands of Jewish and Italian *metics*, developed outside the main system.

In his treatment of specific economic phenomena, Aristotle developed analytic formulations still of importance to modern economic theory, though their source has been long forgotten and their modern usage is in a context very different from that in which he applied them. These analytic formulations include his distinction between use value and exchange value, his emphasis on specialization, and his reliance on both a materialist and an ethical hedonism as the basis of his concept of diminishing marginal utility. Despite (or perhaps because of) the juridical orientation of his analysis of two-party exchange, Aristotle's works were used as the main reference for scholastic interpretations of fairness in exchange as well as for inquiries into price-forming processes and the "just" price. His monetary theory, since it was couched in

commercial terms, has never lost its pertinence. It survived more or less intact, despite disputes over its interpretation, into nineteenth-century economic thought. This was probably a result of the coincidental way in which it applied both to the market and to the *oikonomia* of the *polis*.

John Gillies, an enthusiastic late-eighteenth-century translator of Aristotle, claimed that the works of the economists of his day, "not excepting those of Hume and Smith," were based on Book V of the *Ethics* and the first book of the *Politics*; further, that Montesquieu's *Spirit of Laws* is very close to Books III, VI, and VIII of the *Politics*, while Machiavelli's *Prince* "is entirely copied" from the last chapters of Book VII.[90] Whether or not Gillies's allegations are entirely valid, it is clear that Aristotle's economic writings had a significant influence on later economic thought.

In the long history of Aristotle's writings in the West, his economic analysis was for most of that time studied as relevant to current economic problems.[91] It was only with the eighteenth-century discovery of the apparently rational resource-allocating capacities of the self-regulating market system and the liberating potential of economic expansion that the older administrative approach of the ancient Greek science of *oikonomia*, with its emphasis on stability and self-sufficiency, was deemed an anachronism, and no longer relevant to current problems. Whether the self-regulating market system of modern economic thought is, in fact, the inexorably efficient rationalizer of all economic interactions, following its "passionless way without traceable relation or deference to any man's convenience, and without traceable guidance toward an ulterior end,"[92] is probably not a testable hypothesis. There is no doubt that the market has been *believed* to operate in this way, and that is the important thing. "One must never make the fatal mistake in the history of ideas," Paul Samuelson has written, "of requiring of a notion that it be 'true.'" The job of the historian of ideas, he maintains, is to find "what men have believed."[93] This is particularly important in the field of economics for, as G. L. S. Shackle contended, "In natural science, what is thought is built upon what is seen; but in economics, what is seen is built upon what is thought."[94] A. L. Macfie goes even further. "Economics in the full sense," he writes, "does not just examine facts; it rationalises, indeed *creates* the experience with which it deals."[95]

Whether the administrative theory of *oikonomia* may be useful for modern economists, especially those concerned with market externalities and welfare premises and those in fields, both in government and in the private sector, where management science has become increasingly important and further removed from market analysis, is another question. The fact that the two approaches have been assumed to be fundamentally different, even though they both have been employed in the efficient allocation of resources, should draw

attention to the basically ideological nature of much scholarly perspective.[96] The administrative orientation of *oikonomia* forces us to face the fact that, ultimately, it is human beings who are the decision-makers, who must make choices with goal and value implications, a responsibility easier to avoid if decision making is viewed simply as better or worse adjustments to some inexorable rational process controlled by the market. Rationality may be a factor in decision making, but, as noted by Shackle, reason has its limitations in any system that is not static. He points out that "if we wish to claim that reason by itself is a sufficient guide for conduct, we need to claim, not that reason can find novelty, but that it can find all novelties and thus *exhaust* novelty." Moreover, "only when novelty is eliminated and *all* is known can reason be the sole guide of conduct." "It is only in the timeless fiction of general equilibrium," he adds, "that reason can prevail alone."[97]

The separation of the discipline of economics from its humanistic origins in *oikonomia* has given it an aura almost equal to that which has surrounded the discoveries of empirical science. Its claim to a reliance on rational efficiency, however, has not changed the fact that choices of ends and value judgments must be made.

Epilogue

For better or for worse, we have not yet discovered one single problem of Understanding that the Greek Philosophers did not formulate.

—Nicholas Georgescu-Roegen[1]

Economic historians may debate about the dimensions and role of the commercial sector in ancient Greek life, but there can be no doubt that it was significant enough to be the subject of widespread and serious reflective thought. Greek literature, however, was generally couched in administrative and ethical terms, and economic formulations were made in the broader context of the ancient polity and not from the perspective of participants in a market process, the focus of modern economic theory. Scholars who have attempted to analyze Greek economic ideas without recognizing this difference have created difficulties for themselves. Some, failing to find market-oriented economic discussions, have simply dismissed the Greeks as being concerned only with ethics and philosophy and not at all with economic matters. Others, also failing to see the different point of view, have tried, unsuccessfully, to fit their economic ideas into the mold of another age.

Many of the conceptions of the ancient Greeks are framed in startlingly modern terms. In their writings are found, for example, clear-cut treatments of the whole range of quantitative comparisons associated with hedonistic subjective choice, stated in almost identical terms as those employed at the turn of the eighteenth century by Jeremy Bentham. Yet it has been supposed that Bentham derived his notions from empirical observation of the market system and the industrial revolution unfolding before his eyes. There are also statements of efficient management principles in ancient Greek literature that impress modern specialists in the field, although it is widely believed that concern for marginal efficiency grew out of the intensity of competition in the modern market economy. We find, too, abstract discussions of the division of labor, specialization, capital goods, diminishing marginal utility, and qualitative and quantitative efficiency, analytic concepts which have been identified with the emergence of the market system of modern capitalist economies. Yet

the Greeks wrote about all of these notions in contexts quite unrelated to the market process, with which the concepts were subsequently associated when nineteenth-century economists found in that matrix the mechanism which, they believed, regulates economic processes with clockwork automaticity without the need of conscious human direction.

The ancient Greeks developed a far-flung system of trade, and they presided over an explosion in the coinage of money in the mid-sixth century B.C. They understood that low prices drive craftsmen out of business and that high prices provide an inducement to trade. They even understood monopoly, and they analyzed exchange in various ways. They extended perspectives they developed about two-party distributions of assets and the division of booty to analyses of isolated exchange applicable to trade between individuals and to commerce between states.

The Greeks saw economic possibilities in the acquisition of wealth from the earth through agriculture, mining, and timbering, and they understood very well the process of wresting it from other peoples through warfare and piracy, but they had difficulty formulating a concept of novation, of the generation of something new, of an appropriable, investable surplus (capital) from economic activities. Aristotle did have a concept of an increase in subjective utilities resulting from the mutual exchange of goods which parties value less for goods they value more, but this notion comprehended an increase in total utility, not in total material wealth. The closest the Greeks came to recognizing even the possibility of a material surplus was in Aristotle's oblique reference (*Pol.* 1258a35) to the "surplus" ("residuum," "what remains over") belonging to the offspring, perhaps a reflection of the stark necessities of Greek life where the continuing problem of overpopulation was dealt with not only by colonization but also by infanticide.

Although the Greeks were by reputation consummate traders, it never occurred to them that the goings on in the agora might function as a regulative device for the conduct of their economic affairs. The market mechanism, if indeed they thought of it as a process at all,[2] could never have been, for them, anything more than an instrumentality subject to human manipulation. They relied, not on the rationality of the market, but on their own rationality, expressed in their participation in the political process and in the measures they promulgated in their public assemblies for the regulation of civic and economic life. In fact, political participation in the legislative process seemed to be the only society-wide dynamic they recognized. They certainly did not conceive of the market as a natural and automatic process on the order of the law of gravity or the rotation of the planets. That conception did not mature until the nineteenth century. The Greeks developed major commercial cen-

ters and extensive international trade, but they viewed exchange as functioning, not as part of a market *system*, but under the aegis of other facets of the social fabric: the customs of guest friendship, gift exchange, the unwritten law of hospitality, temple offerings, administrative authority, and taxation.

On the other hand, the Greeks were theorists par excellence, a bent epitomized by Plato's theory of the Ideas which pictured the *real* world in terms of abstract models or prototypes, of which observable earthly phenomena were thought to be only pale reflections. It was an inclination described very well by D. F. Lawden:

> Pygmalionlike, man creates his models of the universe and then, succumbing to their fascination, cannot find the heart to destroy them when it is found they are inadequate for their purpose of explaining his experience of nature. The Greeks of all races were most prone to this weakness. They delighted in abstract thought to such an extent that they soon convinced themselves that their mental creations were no mere figments of the imagination but were glimpses of the aetherial reality which lay behind the mundane appearance of things. . . . A Euclidian point could be represented by a fingermark in the sand, but in its essence it was an abstract idea and as such occupied a higher plane of reality than the depression in the sand. Observe the reversal of outlook which has taken place: the theoretical structure has been elevated to the prime status of reality, whereas the phenomena which it was created to explain have become only partially real, acquiring any reality they do possess from the abstract principles which they embody. This doctrine of the primacy of the theoretical model over the physical phenomena received its full expression in the works of Plato and, after two thousand years, its siren song is still almost irresistible."[3]

That it still appeals to some economists is reflected in the fact that, as noted by William Jaffé, "equilibrium economists have contrived market models to elucidate mathematical systems instead of developing mathematical models to elucidate market systems."[4]

But the Greeks had a practical side too, for at the analytic core of all of the literature examined in this study, from preclassical times through the fourth century B.C., there is a continuous thread of concern for the rational and efficient administration of enterprises, from warfare to agriculture. This interest was abstracted into a formal art, called by them the "royal art" or *oikonomia*, and this body of knowledge was the ancient predecessor of political economy. In Protagoras's led democracy it was the expertise or "virtue" to be taught to

the populace by wise leaders. Plato, on the other hand, thought it could only be imposed by administrative fiat by his authoritarian philosopher-king.

Xenophon's instructional treatise on efficient management and leadership, the *Oeconomicus*, is a prime example of this genre of Greek literature, and it has given us not only the name for the discipline of economics but also, in his emphasis upon the human variable, the major clue that helps explain the direction of Greek thought on economic matters. In his society the role of slavery, the basically agricultural and subsistence nature of the economy, as well as the patterns of military and political instability which were characteristic of the period, all tended to orient the Greeks toward an anthropocentric political economy. Thus their *oikonomia* or political economy was the study of the efficient management of personal and political affairs, with emphasis upon the human factor. Modern political economy, on the other hand, concentrates primarily upon the material factors of economic life and only secondarily upon human responses to them. This is why the assumption of scarcity has become so important, even essential, in modern definitions of economics. It could not be otherwise in a discipline focusing on a material-oriented, goods-rationing market process which allocates the wherewithal of economic life to competitive contenders for the gratification of insatiable wants.

Although the ancient Greeks lived far closer to the edge of subsistence and survival than modern Western man, scarcity as a factor in their economic life did not become central to their orientation. They recognized possibilities for degeneration and loss in the material and cultural aspects of life and the threats to human happiness from the dark forces of fate, particularly if stable political and economic systems were disrupted by uncontrolled change, but, at the same time, they had a buoyant faith in their own capacity to manage their own political and economic destiny. As illustrated most clearly in Xenophon's and Aristotle's writings, the Greek approach was to accept the physical limits of existence and to focus on human adjustments, although Plato alluded to the problem of scarcity in the *Gorgias* (493e). Thus self-sufficiency and stability were two of the highest goals of Aristotle's *polis*, and it was because of this that he saw clearly the need for a political economy with an internal regulatory mechanism which would assure stability and also why he distinguished exchange in his system from the "unnecessary" or "unlimited" kind, *chrematistics*. His ideal was a carefully structured agrarian economy in which natural needs and psychic values were subject to orderly supervision by the rational element in mankind. Material needs were provided in his self-sufficient agrarian household under the supervision of the family patriarch, the rational element in the family, while public needs were provided by the

political extension of these citizens into a *polis*, where, as illustrated in his *Rhetoric*, the superior power of rational persuasion guided the community into efficient choices of the proper means to the explicit end of human happiness. In his view, exchange for nonnecessities, unrestrained by the requirements of need, would contribute nothing to human happiness and could only disrupt the stability of the community.

In Aristotle's system, rationality, efficiency, and self-interest or self-love were cut from the same cloth. Ethical and psychic values for both the individual and the community defined the natural limits inherent in diminishing utilities, which led to ordinal substitutions of higher values for lower ones as physical needs were satisfied. In this context, the producer-consumer in the agrarian community followed his own rational self-interest in placing the quality of life ahead of material overindulgence. A common rationality thus led to a continuum between the microeconomic values of the production-consumption unit of the household and the macroeconomic value of happiness and self-sufficiency of the community.

We have seen that one of the important issues raised by Aristotle, the necessity for an internal regulatory mechanism in a political economy, has been a continuing problem for economic theorists who wish to explain how an equilibrated system of contending elements can remain stable. Unless there is an internal regulatory mechanism in any such system, one of the contending elements must eventually overwhelm the others. Adam Smith realized that a theory of limit was crucial to his explanation of the operation of a self-regulating market economy and, over the course of his lifetime, he advanced three different models of natural constraints. Paralleling Aristotle's principle of diminishing utility, in the *Moral Sentiments* he advanced the notion of a physical limit operating to impose restraints on human greed. In the same work he also introduced the idea of a socially induced self-restraint in his theory of "human sympathy" expressed through the "impartial spectator," an idea with clear affinities to Protagoras's principle of "fellow feeling" and Plato's ethical hedonism. His final model, and the most famous, was the equilibrium of avarice controlled by the "invisible hand" which he put forward in the *Wealth of Nations*.

Although clear connections have been preserved between ancient and modern thought in many areas of intellectual endeavor, for example in philosophy and in some scientific areas, the connections between ancient and modern economic ideas have been obscured by the passage of time almost as completely as if they, like physical artifacts, had been covered by the debris of succeeding centuries. In view of the evidence presented in this study, the question may be asked how this has happened. The answer seems to lie in the

ideological influence of eighteenth-century naturalism[5] which shaped an economic methodology in which the market mechanism is viewed as the only "natural" regulator of economic transactions, a postulate which would have been unintelligible as late as medieval times. With the isolation of the economy from direct control by political authorities as the capitalist system developed outside the feudal and scholastic systems which still at least gave lip service to the ethical and civic norms enunciated by Aristotle, the emerging market came to be seen as the new "administrator" of the economy and, in economic theory, clothed with all the rational attributes formerly thought to reside only in the human mind. The ascendance of the view of the market as a natural phenomenon with an internal regulatory mechanism which permits it to operate like any physical system without human interference has tended to obscure the earlier administrative tradition of political economy followed from ancient Greek times through the Middle Ages to Adam Smith in which man himself was viewed as the manipulator and regulator, the administrator of his economic affairs. Smith's eclecticism included elements of both systems: his embracing of the nascent market tradition is illustrated by his theory of the invisible hand, while his identification with the administrative tradition is demonstrated by his concern with taxation and trade policy and his view of economics as a branch of jurisprudence. His presumption that the capital necessary for commercial and industrial expansion could only be derived from an agricultural surplus is more in line with the administrative and manorial tradition going back to Aristotle.[6]

Economics is widely claimed to be an empirical, value-free science whose formulations are extrapolations from the observed economic data, a view which naturally places little emphasis or value upon the study of the past as a potential source of insight for appraising the validity of current economic theory. This "search for certainty, for being 'scientific,' this lusting for the non-scientist's notion of what is a natural science, with physics as the model, with its proliferation of laws and predictions," as noted by Finley, "is widespread among the various disciplines dealing with human behaviour."[7] But, as we have seen, the Greeks used very similar and sometimes identical formulations to those of modern economic theory in both economic and noneconomic contexts, a fact which calls into question the assumption that modern market-oriented economic theory is an empirical generalization of economic data, free from ideological and historical bias.

And what of the two opposing views of the ancient economy, of Rostovtzeff's contention that "the modern development . . . differs from the ancient only in quantity and not in quality"[8] (that, in other words, modern economic theory is applicable to both) and Finley's assertion that the primitive

patterns of ancient Greek economic life were so utterly different from our own that there can be no relevant connections between ancient and modern economic conceptions, exemplified in his argument that, in Aristotle's *Ethics*, "there is strictly speaking *no* economic analysis rather than poor or inadequate economic analysis"?[9] Finley made clear his belief that there is no middle ground between his and the Rostovtzeffian view which might be bridged by further research.[10]

One may first notice that both Rostovtzeff and Finley concentrated their efforts on analyzing the ancient *economy* and that neither devoted much time to the analysis of ancient *economic thought*. Both thus based their conclusions on what is known about the ancient Greek economy, Rostovtzeff asserting that it was similar enough to modern economic patterns to make contemporary theory useful to its study, Finley contending that it was not. Neither, however, considered the question examined in this study: whether ancient Greek ideas influenced subsequent economic thought. While there seems to be little profit in applying modern economic doctrines based on market premises to premarket economies, this is not to say that Greek formulations had no subsequent currency in economic thought. This study has conclusively demonstrated that modern economic theory owes a significant debt to the ancients. It is true that the Greeks failed to notice the invisible hand of the market and, instead, approached efficiency, distribution, economic organization, and individual and public utility from ethical, jurisprudential, and, ultimately, administrative perspectives. This approach to economic questions was in fact the dominant one throughout most of recorded human history, with market-oriented economic analysis a very recent development.

A. Momigliano termed Finley's work "the most valuable writing on ancient history since 1945," but he called attention to the fact that Finley's celebration in *The Ancient Greeks* (1963) of their "special rationality," which he thought could be "compared with our rationality and even be used to improve our rational behavior" was a theme to which he never returned—"except to deny that rationality in the narrower Weberian sense was not normally applied by the Greeks to their economic transactions."[11] In broadest terms, the acceptance and detailization of human rationality is presumed to be the very essence of modern economic theory. The irony inherent in Finley's recognition, on the one hand, of the "special rationality" of the ancient Greeks and its modern relevance in some areas and, on the other, his denial that the Greeks ever applied such an important analytical approach to their economic affairs is an anomaly which would seem to require further explanation.

The connections revealed in this study between ancient and modern economic thought are but faint indications of what may have been a far more

powerful influence than has hitherto been recognized. Ultimately, the sense of a rational model to which individuals strive to adjust, a joint bequest of Plato and Aristotle, provided a full-fledged rationalization of self-interest and laissez faire. The modern conception of the market, with its ideal perfection and preordained rational equilibrium between price and quantity and containing the seeds of self-regulation, is very like a Platonic Ideal Type. There may be more significance than has been recognized in the fact that Adam Smith's inaugural lecture for his chair in moral philosophy at the University of Glasgow contained a lucid exposition of Plato's theory of the Ideas. It would thus behoove us to look a little closer, heeding Gomperz's warning that we shall never be free of the ancient Greeks until we understand the origins of our intellectual past.

Notes

Introduction

1 *History of Economic Analysis*, ed. Elizabeth B. Schumpeter (New York: Oxford University Press, 1954), p. 242.

2 *The Anniversaries* (1611), ed. Frank Manley. (Baltimore: Johns Hopkins University Press, 1963), 278. Even this image has ancient Greek roots. At one of Plutarch's dinner table conversations (*Mor.* IX.viii.2, 719–20), it is asserted that "matter is imprisoned . . . and encompassed by lines and by the figures generated by lines." As early as the *Iliad* (III.205–30), the image of weaving or netting occurs in Greek literature, and it continued to be widely used as a frame of reference for abstraction.

3 S. C. Humphreys identifies a nascent separation of economy and polity in Hellenic times limited, however, to an individualistic conception of most private economic concerns. The economic ramifications of public decisions, she emphasizes, were discussed in the "idiom of politics." See her *Anthropology and the Greeks* (London: Routledge & Kegan Paul, 1978), pp. 257 ff. and p. 307, n. 5. The disembedding of the economy as a result of the emergence of the capitalist system and the development of a self-regulating market structure in the eighteenth century is the thesis of Karl Polanyi's *The Great Transformation* (New York: Rinehart, 1944). See Fernand Braudel, *The Wheels of Commerce*, trans. Siân Reynolds, vol. 2 of *Civilization and Capitalism, 15th-18th Century* (New York: Harper & Row, 1982), pp. 225 ff., for a different interpretation that broadens perspectives on the development of the market process in Europe. That such disembedding was not a precondition for the Industrial Revolution is illustrated by the Soviet Union's emergence as a world industrial power and also by the modern Japanese economy, which retains many preindustrial features. While Paul A. Rahe's argument for the primacy of the ancient Greek polity over its economy and social structure has merit, his criticism of the Polanyian position is tied to an excessively narrow interpretation of what Polanyi meant by "society." See Rahe's "The Primacy of Politics in Classical Greece," *American Historical Review* 89 (1984), pp. 265–93.

4 Lord Campbell, *The Lives of the Chief Justices of England* (New York: James Cockcroft, 1873), III, pp. 299–300, described the court reports of this time as "swarming with decisions about lords and villeins, about marshalling the champions upon the trial of a writ of right by battle, and about the customs of manors whereby an unchaste widow might save the forfeiture of her dower by riding on a black ram and in plain language confessing her offense."

Mercantile questions, he wrote, "were so ignorantly treated when they came into Westminster Hall, that they were usually settled by private arbitration among the merchants themselves."

5 See Edwin Cannan's introduction to Smith's *Lectures on Justice, Police, Revenue and Arms* (Oxford: Clarendon Press, 1896), pp. xxxi–xxxii, particularly his discussion of Smith's reiteration of the inclusion of political economy within the purview of jurisprudence in the sixth edition (1790) of *The Theory of Moral Sentiments*. C. A. Cooke, "Adam Smith and Jurisprudence," *Law Quarterly Review* 51 (1935), p. 332, asserts that "it is because Adam Smith saw economic problems as problems of justice and therefore as problems of law that the *Wealth of Nations* is as much a functional study of law as it is an investigation in political economy."

6 *A History of Economic Reasoning* (Baltimore and London: Johns Hopkins University Press, 1983), p. 126.

7 W. S. Holdsworth, *A History of English Law* (Boston: Little, Brown, 1924), V, pp. 86–87. Holdsworth's description (pp. 60–154) of the Italian Law Merchant and its evolution into the Law Merchant of western Europe and England is instructive. See also Paul R. Teetor, "England's Earliest Treatise on the Law Merchant," *American Journal of Legal History* 6 (1962), pp. 178–210; and S. Todd Lowry, "Lord Mansfield and the Law Merchant: Law and Economics in the Eighteenth Century," *Journal of Economic Issues* 7 (1973), pp. 605–22.

8 Werner W. Sombart described double-entry bookkeeping as "born of the same spirit as the systems of Galileo and Newton." "Using the same means as these," he wrote, "it orders the phenomena into an elegant system, and it may be described as the first cosmos built up on the basis of mechanistic thought." Quoted by A. C. Littleton and B. S. Yamey, *Studies in the History of Accounting* (Homewood, Ill.: Richard D. Irwin, 1956), pp. 3–4, from the 6th ed. of Sombart's *Der Moderne Kapitalismus*.

9 Published as "The History of the Ancient Logics and Metaphysics" in *Essays on Philosophical Subjects* (London: T. Cadell and W. Davies, 1795). Glasgow ed. (1980), pp. 118–29.

10 "Greek Influence on Adam Smith," in *Études dédiées à la mémoire d'André M. Andréadès*, ed. K. Karvaressos (Athens: Prysos, 1940), pp. 79–80. Scott deals specifically with Greek influences on Smith's Glasgow lectures. For a more recent treatment of classical influences on Smith, see Gloria Vivenza, *Adam Smith e la cultura classica* (Pisa: Il Pensiero Economico Moderno, 1984). Vernard Foley, *The Social Physics of Adam Smith* (West Lafayette, Ind.: Purdue University Press, 1976), marshals arguments for a direct classical Greek influence upon Smith's overview of the social process, with primary attention to the ideas of Empedocles. Jacob Viner, "The Intellectual History of Laissez Faire," *Journal of Law and Economics* 3 (1960), pp. 45–69, cites Aristotle's defense of private property, his "rule of law rather than of men" doctrine, and the idea of harmony of interests between individual and *polis* as ancient Greek ideas which influenced later economic concepts. Charles Fay's judgment that both the *Theory of Moral Sentiments* and the *Wealth of Nations* "issued from the womb of the classics" is well known. See his *Adam Smith and the Scotland of His Day* (Cambridge: Cambridge University Press, 1956), p. 1. On Stoic influences on Smith's social thought, see Norbert Waszek, "Two Concepts of Morality: A Distinction of Adam Smith's Ethics and Its Stoic Origin," *Journal of the History of Ideas* 45 (1984), pp. 591–606.

11 Guy Routh, *The Origin of Economic Ideas* (White Plains, N.Y.: International Arts and Science Press, 1975), p. 2.

12 *The History of Ideas: An Introduction* (New York: Scribner's, 1969), p. viii.

13 *The General Theory of Employment, Interest and Money* (London: Macmillan, 1949), p. 383.

14 *Greek Thinkers: A History of Ancient Philosophy*, trans. from the German edition of 1896 by Laurie Magnus (New York: Humanities Press, 1955), I, pp. 528–29. Richard Jenkyns reiterates this same idea with special reference to Victorian England. "Few people," he writes, "suspect the extent to which the ancient world, and especially Greece, influenced the Victorians." He adds that "unless we realize how much the Victorians thought about Greece, we will not fully understand them." See his *The Victorians and Ancient Greece* (Cambridge, Mass.: Harvard University Press, 1980), p. x; Frank M. Turner, *The Greek Heritage in Victorian Britain* (New Haven, Conn., and London: Yale University Press, 1981); and M. R. Stopper's review of the above cited two books, which also contains an essay on the classics in Victorian education, "Greek Philosophy and the Victorians," *Phronesis* 26 (1981), pp. 267–85.

15 Scott Meikle, *Essentialism in the Thought of Karl Marx* (LaSalle, Ill.: Open Court Publishing Co., 1985), argues that Marx's method and categories, which he terms essentialist, originated in his studies of the Aristotelian literature he researched for his doctoral dissertation on Greek atomism. See also Peter Fenves, "Marx's Doctoral Thesis on Two Greek Atomists and the Post-Kantian Interpretations," *Journal of the History of Ideas* 47 (1986), pp. 433–52. For other citations to Aristotle's influence on Marx's economics, see Chapter VII.

16 Paul Robinson, "The Chomsky Problem" [review of *Language and Responsibility* by Noam Chomsky], *New York Times Book Review*, February 25, 1979, p. 3.

17 Review of *Xenophon: Économique*, ed. and trans. Pierre Chantraine (Paris, 1949), *Classical Philology* 46 (1951), pp. 252–53.

18 Discussion of M. I. Finley's paper, "Classical Greece," in *Proc. of the Second International Conference on Economic History*, 1962 (Paris: Mouton, 1965), I, pp. 11–35.

19 Alan E. Samuel, *From Athens to Alexandria: Hellenism and Social Goals in Ptolemaic Egypt* (Louvain: Studia Hellenistica 26, 1983), p. 7. Two early attempts to survey ancient Greek economic thought were A. A. Trever, *A History of Greek Economic Thought* (1916; reprint, Philadelphia: Porcupine Press, 1978), and H. Michell, *The Economics of Ancient Greece*, 2nd ed. (New York: Barnes & Noble, 1958).

20 *A History of the Ancient World* (Oxford: Oxford University Press, 1928–30), I, p. 10.

21 Finley's view, argued in a number of works, will be examined in some detail in succeeding chapters.

22 Kenneth E. Boulding, "After Samuelson, Who Needs Adam Smith?" *History of Political Economy* 3 (1971), p. 232.

23 William R. Allen, in a discussion of a paper on the history of economic thought, although he conceded that the description needed qualification after hearing a paper describing the personal eccentricities of the Reverend Thomas Robert Malthus.

24 A statement by Daniel Bell, quoted by Bernard Nossiter, "The Cupboard of Ideas Is Bare," *Washington Post*, Sunday, May 20, 1979, p. 85.

25 One of the challenges from outside the field was landscape architect Ian McHarg's savage thrust, *Design with Nature* (Garden City, N.Y.: Natural History Press, 1969), p. 25. "The economists, with few exceptions," he writes, "are the merchants' minions and together they ask with the most barefaced effrontery that we accommodate our value system to theirs. Neither love nor compassion, health nor beauty, dignity nor freedom, grace nor delight are important unless they can be priced. If they are non-price benefits or costs they are relegated to

inconsequence. The economic model proceeds inexorably towards its self-fulfillment of more and more despoliation, uglification and inhibition to life, all in the name of progress—yet, paradoxically, the components which the model excludes are the most important human ambitions and accomplishments and the requirements for survival."

26 Robert L. Heilbroner, *The Worldly Philosophers*, 5th ed. (New York: Simon and Schuster, 1980), p. 226.

27 Mark Lilla, "Thinking Like an Economist," *Harper's* 265 (October 1982), pp. 70–71, asserts that this approach contains the assumption that "all important human behavior can be interpreted economically; [that] economic theory allows one to make powerful and broad generalizations about the world; [and that] therefore any behavior or event that is not explained by economic theory either is not important or cannot be spoken of." He adds, "While this analytical attitude is useful for understanding small problems and for extending one's intuitions, it is precisely the wrong way to understand national economies. It is commonsensical to everyone but economists that the state of the economy depends on far more than the 'economizing' behavior of individuals, that it also depends on certain historical, political, cultural, even spiritual factors." George Dalton referred to the use of the term *maximizing* by the "formalists" in economic anthropology as "a reassuring ritual . . . a fingering of their conceptual beads, as it were" ["Karl Polanyi's Analysis of Long-Distance Trade and His Wider Paradigm," in *Ancient Civilization and Trade*, ed. Jeremy A. Sabloff and C. C. Lamberg-Karlovsky (Albuquerque: University of New Mexico Press, 1975), p. 113].

28 *Epistemics & Economics: A Critique of Economic Doctrines* (Cambridge: Cambridge University Press, 1972), p. 360.

29 Ibid., p. 10.

30 *Economic Theory in Retrospect*, 4th ed. (Cambridge: Cambridge University Press, 1985), p. 4.

31 "Social Economic Organization," in *Readings in Microeconomics*, ed. William Breit and Harold M. Hoekman (New York: Holt, Rinehart & Winston, 1968), p. 3. Knight's chapter is reprinted from his *The Economic Organization* (New York: Harper & Row, 1933). Stanley B. Smith, who effectively refutes the claims of some historians that Thucydides paid no attention to economic motives in his writings, concludes (p. 300) that Thucydides "ascribed to economic elements approximately the importance which they were recognized to possess at the time when the historian lived." He reviews evidence on the economic motive in three areas of Thucydides' writings: on the issue of war and peace, his view of Athens's commercial and imperial policies, and his discussion of the different bases of power for Athens and some of her allies. Smith's treatment of the role of economic surpluses in underwriting military adventurism in the ancient world is particularly interesting. See his "The Economic Motive in Thucydides," *Harvard Studies in Classical Philology* 51 (1940), pp. 267–301.

32 This is true even though the concept of "fate" controlling human destiny is also a theme of some Greek literature, for example Sophocles' *Oedipus Rex*. Even here, however, the emphasis is on how man confronts his fate, still an anthropocentric perspective.

1 *The Emergence of Administrative Rationality*

1 *The Open Society and Its Enemies*, 4th ed. (Princeton, N.J.: Princeton University Press, 1963), I, p. 200.

2 A civilization still flourishing at the beginning of the classical period in Greece. Herodotus (IV.43), for example, tells us that a Phoenician crew commissioned by the Egyptian ruler Necos (610–595 B.C.) to explore the coast of Africa circumnavigated the African continent

in three years. The same Necos began the construction of a canal from the Nile to the Red Sea which was "four days' journey by boat" in length and "its breadth sufficient to allow two triremes to be rowed abreast" (II.158). After a victory over the Syrians at Cadytis, Necos, Herodotus reports (II.159), sent the clothes he wore at this battle "as an offering to Apollo at Branchidae in Milesia." A. B. Lloyd's *Herodotus, Book II, Commentary* 1–98 (Leiden: Brill, 1975) is a useful guide to some of the Herodotean material on Egypt. Carl Roebuck, "Trading," in *The Muses at Work: Arts, Crafts, and Professions in Ancient Greece and Rome*, ed. Carl Roebuck (Cambridge, Mass., and London: MIT Press, 1969), pp. 217–18, describes the Greek trading colony of Naukratis in the Nile delta, founded in the late seventh century B.C. See also Roebuck's "The Grain Trade Between Greece and Egypt," *Classical Philology* 45 (1950), pp. 236–47; and John Boardman, *The Greeks Overseas: Their Early Colonies and Trade* (1964; reprint, London: Thames and Hudson, 1980), pp. 111–51.

3 Ellen Meiksins Wood and Neal Wood, *Class Ideology and Ancient Political Theory: Socrates, Plato and Aristotle in Social Context* (Oxford: Basil Blackwell, 1978), p. 168.

4 O. Neugebauer, *The Exact Sciences in Antiquity*, 2nd ed. (New York: Dover, 1969), pp. 36–37.

5 H. Frankfort, H. A. Frankfort, J. A. Wilson, and T. Jacobsen, *Before Philosophy: The Intellectual Adventure of Ancient Man* (1946; reprint, Baltimore: Pelican Books, 1949), p. 88.

6 For an extensive if idiosyncratic survey of the literature on the origin of the balance, tied to a strained hypothesis that all invention originated in ritual, see A. Seidenberg and J. Casey, "The Ritual Origin of the Balance," *Archive for History of Exact Sciences* 23 (1980), pp. 179–226. Sir Arthur Evans, *The Palace of Minos* (1921–1934; reprint, New York: Biblo and Tannen, 1964), IV, p. 659, characterized the balance at Mycenae as "a natural emblem of stewardship."

7 S. G. F. Brandon, *The Judgment of the Dead: The Idea of Life After Death in the Major Religions* (New York: Scribner's, 1967), p. 23. See pp. 6–48 for a discussion of the development of Egyptian literature on the post mortem judgment and also Brandon's "The Weighing of the Soul," in *Myths and Symbols: Studies in Honor of Mircea Eliade*, ed. J. M. Kitagawa and C. H. Long (Chicago: University of Chicago Press, 1969), pp. 91–110. The symbolism persisted in Christian eschatology, where the Archangel Michael is pictured not only as sounding the last trumpet at the general resurrection but also as having the job of weighing in a balance the "immortal souls" released after death. In most paintings, he is shown with a balance in one hand and a sword in the other. See George W. Ferguson, *Signs and Symbols in Christian Art*, 2nd ed. (New York: Oxford University Press, 1955), p. 168, pl. 51. In the Bible, Job is quoted as crying out, "Let me be weighed in a just balance, and let God know my integrity!" (Job 31:6), and the judgment on Balshazzar (Daniel 5:27) invokes the same metaphor: "Tekel, you have been weighed in the balances and found wanting." Justice is still symbolized by a blindfolded female figure with a balance in one hand and a sword in the other. While the sword is presumptively a symbol of power or authority, it may well relate to the problem of fair division, originally of distributions of meat after the hunt or sacrifice. See Chapter V for a discussion of early ideas on distributions.

8 *Judgment of the Dead*, pp. 23–24.

9 Rupert Gleadow, *The Origin of the Zodiac* (New York: Atheneum, 1969), p. 214, writes: "Zibanitu, the Scales, is a well-known Babylonian constellation and corresponds to the myth of the Last Judgment in the Autumn and the weighing of souls. It happens also to be seasonally suited to Egypt, for the harvest would be weighed, and taxes assessed, when the moon was full in Libra." The procession of the equinoxes has to be considered in associating

it with a harvest period in ancient times. Libra fell earlier in the solar year in the past. Mediterranean and Near Eastern agriculture involved fall planting of grain and harvest in early summer, so that the fiscal year was calculated from mid-summer to mid-summer. The Scales is the only constellation in the Zodiac that is not an animal. Sir Arthur Evans (*Palace of Minos*, IV, p. 658) mentions three Minoan objects, an offertory bowl from Knossos and two tablets from Hagia Triada, on all of which appear signs representing scales or balances. He thinks the signs indicative of stewardship and that they may identify officials as accountants or stewards. See pp. 650–63 for an extended discussion of weights and measures from Minoan Crete. A representation of a square with crossing diagonals (fig. 650d, p. 662), which Evans interprets as a derivative phonogram representing the ingot sign, is particularly interesting. There seems little basis, however, for connecting this Linear A sign with the Ingot sign, which has semicircular lines representing indentations within the sides of a square.

10 Homer's frequent use of the weighing metaphor suggests that it was a familiar one to his audience. Richard B. Onians, *The Origins of European Thought* (Cambridge: Cambridge University Press, 1954), pp. 390 ff., examines the possible meanings of the Greek concepts generally translated as "fate," "portion," or "lot." See also B. C. Dietrich, *Death, Fate, and the Gods: The Development of a Religious Idea in Greek Popular Belief and in Homer* (London: Athlone Press, 1967), esp. pp. 206–9; 252–53; 289–96; and C. M. Bowra, "Homeric Words in Arcadian Inscriptions," *Classical Quarterly* 20 (1926), p. 173.

11 Martin P. Nilsson, *Homer and Mycenae* (New York: Cooper Square, 1968), p. 267. See fig. 56. Brandon (*Judgment of the Dead*, pp. 78–79) discusses a similar scene with scales from a Greek vase painting in which small figures representing warriors are in the scale pans being weighed, as well as other evidence of Mycenaean expressions of possible Egyptian influence on mortuary symbolism involving the balance.

12 *Palace of Minos*, IV, p. 659.

13 Other aspects of Egyptian religion must have been disseminated throughout the eastern Mediterranean by both Phoenician and Cretan contacts. Mention should be made of the Egyptian tradition from the third millennium B.C. that the souls of the dead had to importune a ferryman to carry them across the east lake on their way to the land of the dead. This was a precommercial tradition where persuasion was the only means of inducing the ferryman to give one passage, unlike the classic Hellenic tradition where the dead were buried with a small coin under the tongue so that they might have the fare to pay the ferryman, Charon, to carry them over the River Styx into Hades.

14 *Open Society and Its Enemies*, I, pp. 253–54, n. 10. Popper attributes the Renaissance image of justice to a passage in Plutarch's *De Iside et Osiride* and that of Dike to Hesiod.

15 J.-P. Vernant, *The Origins of Greek Thought* (Ithaca, N.Y.: Cornell University Press, 1982), pp. 35–36, observed that the system of palace recordkeeping in the Mycenaean period "has the look of something borrowed." The Cretan scribes, he says, furnished their new masters in mainland Greece "with the staff as well as the techniques to administer their palaces." M. I. Finley, "The Mycenaean Tablets and Economic History," *Economic History Review* 10 (1957), pp. 128–41, discusses the Linear B Mycenaean records deciphered by Ventris and Chadwick. According to Finley, these records evidence a "massive redistributive operation" with no suggestion of exchange or the use of currency. Finley's conclusion contradicts earlier assertions about the importance of palace trade in the Mycenaean world made by A. M. Andreades and B. Laum. See Andreades's *History of Greek Public Finance*, rev. ed. (Cambridge, Mass.: Harvard University Press, 1933), I, pp. 31 and 210–11, where he dis-

cusses Books I and II of B. Laum's *Heiliges Geld: Untersuchungen über den sakralen Ursprung des Geldes* (Tübingen: Verlag von J. C. Mohr, 1924). Charles J. Bullock's *Politics, Finance, and Consequences: A Study of the Relations Between Politics and Finance in the Ancient World with Special Reference to the Consequences of Sound and Unsound Policies* (Cambridge, Mass.: Harvard University Press, 1939), although published later, adds nothing to Andreades's more thorough work.

16 *History of Greek Public Finance*, I, p. 162.

17 "The Growth of the Athenian State," in *The Cambridge Ancient History*, 2nd ed. (Cambridge: Cambridge University Press, 1982), p. 385.

18 J. C. Billigmeier and A. S. Dusing, "The Origin and Function of the *Naukraroi* of Athens: An Etymological and Historical Explanation," *Trans. and Proc. of the American Philological Association* 111 (1981), pp. 11–16, attribute the office of the *Naukraroi* as guardians of the temple treasuries to a "possibly Bronze Age institution which survived into the classical period."

19 *History of Greek Public Finance*, I, p. 170.

20 Ibid., p. 320. On the Kallias decrees of 434–433 B.C., which were apparently aimed at concentrating temple treasuries in anticipation of the Peloponnesian War, see *A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.*, ed. Russell Meiggs and David Lewis (Oxford: Clarendon Press, 1969), pp. 154–61.

21 See Helmut Berve, *Die Tyrannis bei den Griechen* (Munich: Beck, 1967), and Claude Mossé, *La Tyrannie dans la Grèce antique* (Paris: Presses Universitaires de France, 1969), on the social and economic conditions of the period.

22 *History of Greek Public Finance*, I, p. 207.

23 Ibid., pp. 371–72, 205. Imagery alluding to accounting and auditing procedures occurs often in Greek literature, frequently in connection with references to formal examinations into official conduct in office (*euthunai*) and to the scrutiny of qualifications for citizenship or office (*dokimasia*). One example is Plato's remark in the *Protagoras* (326d–e), that "justice calls men to account." In the *Republic* (330e), the imagery is even more explicit: "Now he to whom the ledger of his life shows an account of many evil deeds starts up even from his dreams . . . in affright." A fragment from Aeschylus reflects the same moral accounting: "If one man offends against another man, Zeus' daughter Dike records his offense in her father's tablets, and sooner or later Zeus will be sure to punish him, either in his own person or through his descendants." Quoted by Hugh Lloyd-Jones in *The Justice of Zeus* (Berkeley and Los Angeles: University of California Press, 1971), p. 87. Aristotle tells us (*Pol.* 1273b) that Solon gave the people the right to elect magistrates and to "call them to account." This system of internal control was introduced by Solon over a century before the economic exigencies to which Andreades attributes it. Aristophanes (*Wasps* 587–88) points out that the *dicasts* (jurymen) in Athens were alone among officials in not being subject to account. The similarity of the Greek system of account with the Egyptian procedure commemorated in the postmortem judgment has received little attention. Solon's travels in Egypt were, of course, a commonplace of ancient tradition. Xenophon's account in the *Anabasis* (V.viii) of the Greek army's resort to the formal calling to account of its leaders suggests the assimilation of this procedure as a panhellenic custom since the mercenaries in the army were drawn from all over Greece.

24 Paul Vinogradoff, *Outlines of Historical Jurisprudence* (London: Oxford University Press, 1922), II, p. 141. Evidence for the requirement of audits of booty procured on military expeditions is cited by W. Kendrick Pritchett, *The Greek State at War*, Part I (Berkeley and Los

Angeles: University of California Press, 1971), p. 85. For references to officials rendering accounts of their offices, see Part II (1974), pp. 19, 131. See also Plato's *Statesman* (298e–99a) and *Laws* (761e, 945b–948b). Jennifer T. Roberts, *Accountability in Athenian Government* (Madison: University of Wisconsin Press, 1982), meticulously documents the thorough integration into Greek life of the system of accountability for officeholders.

25 According to G. E. M. de Ste. Croix, "the whole purpose of ancient accounting was not to measure the rate of profit or loss but to keep accurate records of acquisitions and outgoings, in money and kind, and to expose any losses due to dishonesty or negligence." He adds that "in this respect, private accounts came much closer to public accounting than a modern accountant would have expected; and indeed the methods of Greek and Roman public and private accounting are strikingly similar, in the main indistinguishable, their objectives being much more nearly identical than in modern times." See his "Greek and Roman Accounting" in *Studies in the History of Accounting*, ed. A. C. Littleton and B. S. Yamey, p. 38. Xenophon's definition of household management (*Oec.* I.4) focused on "producing a surplus" to "increase the household." Kurt Singer, "*Oikonomia*: An Inquiry into Beginnings of Economic Thought and Language," *Kyklos* 11 (1958), p. 32, commenting on the development of a sense of rational efficiency in ancient Greek thought, observed that both "the art of the ruler and of the *oikonomikos* in the narrower sense can be exercised with better or worse results and there are rules and standards for their guidance, derived from, or justified by, reasoning. *Oikonomia* thus appears under two aspects: as the description of a pattern of action, and as the norm by which those actions have to be judged. Such a duality of meaning appears to be characteristically Greek: reality is conceived as a well-ordered whole which finds in its idea the criterion of its own goodness." A. M. Snodgrass, *Archaic Greece: The Age of Experiment* (London: J. M. Dent, 1980), p. 124, also makes clear the administrative connotation of *oikonomia*.

26 *Lives*, III. Pericles, xvi. See also William F. Campbell, "Pericles and the Sophistication of Economics," *History of Political Economy* 15 (1983), pp. 112–35, who deplores the development of a mechanistic, rational approach to economics because it avoids an analysis of appropriate values in favor of a built-in, value-free efficiency criterion. In the [Pseudo-] Aristotelian *Oeconomica* (1344b30 ff.), various systems for the "preservation of wealth" are mentioned, including the Persian, the Laconian, and the Attic. The Attic system, where "they sell their produce and buy what they want," eliminating the "need of a storehouse," is a paraphrase of that attributed to Pericles by Plutarch. One of Theognis's poems (XCVIII.899–926) is entirely devoted to the economic problem of managing one's patrimony to make it last to the end of one's life.

27 For an analysis of the financial administration of Athens as it evolved through the fourth century B.C., see P. J. Rhodes, "Athenian Democracy after 403 B.C.," *Classical Journal* 75 (1980), pp. 305–23.

28 Oswyn Murray, *Early Greece* (Atlantic Highlands, N.J.: Humanities Press; Brighton: Harvester Press, 1980), p. 224. M. M. Austin and P. Vidal-Naquet, *Economic and Social History of Ancient Greece: An Introduction*, trans. and rev. M. M. Austin (Berkeley and Los Angeles: University of California Press, 1977), agree with Murray. See pp. 56–58, 214–17.

29 Murray, *Early Greece*, p. 255. The suggestion that coinage originated with the payment of mercenaries had been made earlier by R. M. Cook, "Speculations on the Origins of Coinage," *Historia* 7 (1958), pp. 257–62. Percy N. Ure, *The Origin of Tyranny* (New York: Russell and Russell, 1962), correlates the rise of coinage with the rise of tyrants. É. Will, "De l'aspect éthique des origines grecques de la monnaie," *Revue historique* 212 (1954), pp.

209–31, summarizes the evidence for the development of coinage as an outgrowth of secular and religious temple transactions. See also C. M. Kraay, "Hoards, Small Change and the Origin of Coinage," *Journal of Hellenic Studies* 84 (1964), pp. 76–91; and William Ridgeway, *The Origin of Metallic Currency and Weight Standards* (Cambridge: Cambridge University Press, 1892).

30 On the wheat/barley, gold/silver, and silver/copper ratios in antiquity, see pp. 237–46 of chap. 2, "Keynes and Ancient Currencies," a collection of essays intended for a history of ancient currencies, in *The Collected Writings of John Maynard Keynes*, ed. Elizabeth Johnson and Donald Moggridge (Cambridge: Cambridge University Press, 1982), XXVIII.

31 The story is attributed to Aristoxenus. See W. K. C. Guthrie, *A History of Greek Philosophy* (Cambridge: Cambridge University Press, 1962), I, p. 221. Guthrie concludes (p. 177), however, that Pythagoras's interest in numbers originated with his musical studies. William Ridgeway speculates that the shapes of natural crystals may have inspired his numerical and cosmological systems. See "What Led Pythagoras to the Doctrine That the World Was Built of Numbers?" *Classical Review* 10 (1896), p. 94.

32 Parmenides developed a notion of a basically static world composed of perfectly fitting geometric components of the sphere, a system thus subject to deductive analysis. Giorgio de Santillana has argued that this was the first mathematical formulation of the physical world and therefore the beginning of modern science. See his *The Origins of Scientific Thought* (Chicago: University of Chicago Press, 1961), chap. 6, "A Universe of Rigor."

33 The term *bureaucratic individualism* is used by Alasdair MacIntyre, *After Virtue: A Study in Moral Theory* (Notre Dame, Ind.: University of Notre Dame Press, 1981), pp. 33, 68, to refer to the formulation of the modern social problem in terms of the tension between the demands of administrative uniformity (administrative sovereignty), stated in terms of utility and/or efficiency, and the presumption of individual choice (the sovereignty of the individual), stated in terms of rights. My use of the term refers simply to the patterns of uniform treatment in bureaucratic systems of distribution and/or collection which historically have resulted in expectations of uniformity of treatment (but not rights) on the part of subject populations. J. Walter Jones, *The Law and Legal Theory of the Greeks* (Oxford: Clarendon Press, 1956), p. 151, noted that "the Greeks never worked out anything resembling the modern notion of a legal right. Though a judicial decision in favour of a party resulted in some benefit to him, something personally or economically advantageous to his interests, it was relative rather than absolute, expressing a preference rather than sanctifying a claim against all and sundry." He does not make a distinction between claims against the state and claims against other individuals, but even in the latter case the individual had essentially to resort to self-help and public opinion to obtain satisfaction.

34 Guthrie, *History of Greek Philosophy*, III, p. 55. The relationship of the Greek concept of *moira* to a notion of order or anticipated share has not been given much attention in connection with the idea of administered distribution.

35 See *Odyssey* VI.188–90, where Zeus's authority over his subjects is stated in essentially the same terms.

36 George Thomson, *Studies in Ancient Greek Society: The Prehistoric Aegean* (London: Lawrence & Wishart, 1949), p. 110.

37 Gustave Glotz discusses the waning power of the patriarchal family and the increased individuality which developed in the post-Homeric period. See his *La solidarité de la famille en Grèce* (Paris: Libraire des Écoles françaises d'Athènes et de Rome, 1904). The Woods (*Class Ideology and Ancient Political Theory*, p. 141) assert that the aristocracy in the *polis* assumed

a leadership role similar to that of the patriarch in the *oikos*. Our interest is in the individualism which this pattern may have fostered in the aristocracy.

38 Aristotle (*Pol.* 1259b) commented that the rule of the head of the household is "like that of a monarch over subjects."

39 *Outlines of Historical Jurisprudence*, I, p. 233.

40 In the *Euthyphro*, a young man prosecuting his father for having killed one of his own slaves is pictured by Plato as a sad commentary on the loss of filial piety.

41 Vernant, *Origins of Greek Thought*, pp. 125–26, elaborates this image into a concept of equilibration and equality focused on the "public hearth" in the agora linking the multiplicity of domestic hearths.

42 Fustel de Coulanges, "Authority of the King," in *Primitive and Ancient Legal Institutions*, ed. Albert Kocourek and John H. Wigmore (Boston: Little, Brown, 1915), pp. 99–100.

43 A. W. H. Adkins, *Merit and Responsibility: A Study in Greek Values* (Oxford: Clarendon Press, 1960), p. 35. As a basis for appraising Adkins's work, see the following and the literature there cited: A. A. Long, "Morals and Values in Homer," *Journal of Hellenic Studies* 90 (1970), pp. 121–39; and Hugh Lloyd-Jones, *Justice of Zeus* (1971). K. J. Dover, "The Portrayal of Moral Evaluation in Greek Poetry," *Journal of Hellenic Studies* 103 (1983), pp. 35–48, questions the narrowness of Adkins's deductions of moral values from condemnatory and commendatory terms in Greek literature and contends that the early Greeks had a more subtle array of moral values than Adkins suggests. C. J. Rowe, "The Nature of Homeric Morality," in *Approaches to Homer*, ed. Carl A. Rubino and Cynthia W. Shelmerdine (Austin: University of Texas Press, 1983), pp. 248–75, concedes the individualistic emphasis on success in Homeric literature but also finds elements of concern for the opinion of others and notions of proper limits on behavior. See further Leonard L. Woodbury, "Simonides on *Arete*," *Trans. and Proc. of the American Philological Association* 84 (1953), pp. 135–63. Individual success was still emphasized in the late fifth century B.C., as evidenced by an essay dealing with the factors necessary for success and methods to use it known as *Anonymus Iamblichi* (D.-K. 89). See *The Older Sophists*, ed. Rosamond K. Sprague (Columbia: University of South Carolina Press, 1972), pp. 271–78; and A. T. Cole, "The *Anonymus Iamblichi* and His Place in Greek Political Theory," *Harvard Studies in Classical Philology* 65 (1961), pp. 127–63.

44 Adkins, *Merit and Responsibility*, p. 34.

45 "A Warning to Winners," review of *Pindar's Victory Songs*, trans. Frank J. Nisetich (Baltimore: Johns Hopkins University Press, 1980), *Times Literary Supplement*, December 5, 1980, p. 1383. In the famous chariot race in the *Iliad* (XXIII.236–91), multiple prizes were offered, but this dates from a very early period. William J. O'Neal, "Fair Play in Homeric Greece," *Classical Bulletin* 56 (1979), p. 13, emphasizes that "the single aim in all Greek athletics was to win." He notes that "the Homeric ethics did not require fair play. In fact, *to win* was the important object, *how* was secondary."

46 Chap. 6 of Chester G. Starr's *Economic and Social Growth of Early Greece 800–500 B.C.* (New York: Oxford University Press, 1977), contains a penetrating discussion of aristocratic individualism in archaic and classical Greek society. Richard A. Posner, "The Homeric Version of the Minimal State," *Ethics* 90 (1979–80), p. 45, takes note of the fact that in the social unit of Homeric society, the *oikos* or household, individuality was accorded only to the head of the household and not to individual members.

47 M. I. Finley, *Ancient History: Evidence and Models* (New York: Viking Press, 1986), p. 68.

48 Lloyd-Jones, *Justice of Zeus*, p. 158, noted that "the most general Greek term of ethical

commendation, the word *agathos*, generally translated as 'good,' originally connoted being good at something, at first usually being good at fighting." Adkins, *Merit and Responsibility*, p. 225, observes that *agathos* was extended to mean being effective at securing "the safety and prosperity of the state."

49 See Eric A. Havelock, *The Greek Concept of Justice: From Its Shadow in Homer to Its Substance in Plato* (Cambridge, Mass.: Harvard University Press, 1978), p. 203, for an interpretation of this ancient view of prosperity and justice.

50 Chester G. Starr, *The Origins of Greek Civilization, 1100–650 B.C.* (New York: Alfred A. Knopf, 1961), makes the same point about the hoplite method of warfare (pp. 332–33) and notices the growing "tension between human egoism and communal ties" (p. 300) in ancient Greece from the seventh century on, but his analysis is concerned mainly with the restraints on aristocratic privilege and the decline of personal leadership, rather than with the development of administrative processes and the emergence of tyrannies in the sixth century B.C. A. M. Snodgrass gives detailed attention to the development of weaponry in ancient Greece but offers only limited information about the development of the phalanx. See his "The Hoplite Reform and History," *Journal of Hellenic Studies* 85 (1965), pp. 110–22; and *Arms and Armour of the Greeks* (Ithaca, N.Y.: Cornell University Press, 1967). Yvon Garland, *War in the Ancient World*, trans. Janet Lloyd (New York: W. W. Norton, 1975), pp. 124–26, discusses the significance of the phalanx in fostering a sense of social cohesion which superseded heroic individualism. For citations to more recent literature on ancient warfare, see Snodgrass, *Archaic Greece*, p. 223.

II *Hedonic Calculation and the Quantification of Choice*

1 *Wealth of Nations*, IV.v (Cannan ed., p. 501).

2 For a recent treatment of the background of this idea in early British political and economic thought, without reference, however, to ancient sources, see Milton L. Myers, *The Soul of Modern Economic Man: Ideas of Self-Interest, Thomas Hobbes to Adam Smith* (Chicago and London: University of Chicago Press, 1983). Barry Schwartz, *The Battle for Human Nature: Science, Morality and Modern Life* (New York: W. W. Norton, 1986)] argues against the contemporary application of the premise of *homo economicus* as well as similar notions in evolutionary biology and behaviorist psychology.

3 See S. Todd Lowry, "The Roots of Hedonism: An Ancient Analysis of Quantity and Time," *History of Political Economy* 13 (1981), pp. 812–23.

4 Pericles' argument was, however, contradicted by Euphemus's assertion (Thuc. VI.85) that self-interest in fact was the guiding principle in Athenian foreign policy, since "for despots and imperial cities nothing is unreasonable if expedient." "In Greece," he added, "we treat our allies as we find them useful."

5 The C. C. W. Taylor translation of the *Protagoras* (listed in the "Translations" section) is quoted in this chapter. Other well-known translations are: W. K. C. Guthrie, *Plato's Protagoras and Meno* (New York: Penguin, 1956); Gregory Vlastos, ed., *Plato: Protagoras*, B. Jowett's translation revised by Martin Ostwald (New York: Liberal Arts Press, 1956); and B. A. F. Hubbard and E. S. Karnofsky, *Plato's Protagoras: A Socratic Commentary* (London: Duckworth, 1982). Opinions vary about whether the hedonistic views presented in the *Protagoras* represent the opinions of either the historical Socrates or Plato. For a discussion, see J. P. Sullivan, "The Hedonism in Plato's *Protagoras*," *Phronesis* 6 (1961), pp. 10–28.

6 The story is considered apocryphal by modern scholars, at least as it pertains to Democritus, who is now thought to have been born later than Protagoras.

7 *Wealth of Nations*, I.ii (Cannan ed., p. 15).

8 Bruno Snell explains *dike* as "the portion due to each member of the group." *The Discovery of the Mind: The Greek Origins of European Thought*, trans. T. G. Rosenmeyer (New York: Harper & Brothers, 1960), p. 169.

9 The word *aidos* has been variously translated as "modesty," "conscience," "respect for others," "reverence," and "holiness." See D. Loenen, *Protagoras and the Greek Community* (Amsterdam: N.V. Noord-Hollandsche Uitgevers Maatschappij, 1940), pp. 6–8, for a discussion of the meaning of this concept.

10 Richard Kraut argues that Socrates uses "excusable dishonesty" in the *Protagoras* in temporarily accepting a hedonistic definition of virtue when dealing with courage as a form of knowledge to keep the discussion from going off on a tangent. See his *Socrates and the State* (Princeton, N.J.: Princeton University Press, 1984), p. 265. Adolfo Levi, "The Ethical and Social Thought of Protagoras," *Mind* 49 (1940), p. 288, n. 2, mentions that "the teachability of virtue must have been in Athens an habitual subject of discussion." It was the subject of one of Plutarch's dinner table conversations (*Mor.* VI.439B–440B), where it is argued that it is ridiculous to contend that virtue or "prudence" cannot be taught since it is the "principle which orders all the arts, which assigns each person to a place of usefulness." However, Diogenes Laertius (II.121, 122) reports that two students of Socrates, Crito and Simon, wrote works in which they argued that it could not be taught. Aristotle specifically invoked hedonism as an instructional principle when he observed (*N.E.* 1172a20) that "in educating the young we steer them by the rudders of pleasure and pain." Most of Book X of the *Nichomachean Ethics* is devoted to a discussion of pleasure. See Chapter IV for further discussion and bibliographical notes on the teachability of virtue.

11 Terence Irwin, however, recognizes the importance of the discussion of virtue as a measuring science or craft in the *Protagoras*, pointing out that the conception of virtue as a craft is extended there to a notion of a value-free science of technical efficiency "concerned with instrumental means and not with the choice of ends," just as the carpenter's craft "does not teach us that it is desirable to make beds, but how to make them, given that we want to make them." See his *Plato's Moral Theory: The Early and Middle Dialogues* (Oxford: Clarendon Press, 1977), pp. 108–9; and, contra Irwin, R. A. Bidgood, "Irwin on Hedonism in Plato's *Protagoras*," *Ancient Philosophy* 3 (1983), pp. 30–32. Martin Ostwald, "Plato on Law and Nature," in *Interpretations of Plato*, ed. Helen North (Leiden: E. J. Brill, 1977), pp. 41–63, misses the point when he contends that Protagoras contradicts himself in claiming to teach virtue and at the same time conceding that every individual has his own view of virtue. Protagoras's theory of the "led democracy" (discussed in Chapter VI herein) encompasses both public participation and instructive leadership in the political process. There is no contradiction between the ideas that individuals have their own views on a matter and also that a leader should try to teach better views. The term *sophrosyne* seems to have parallel connotations to that of *arete* or virtue, evolving from a notion of prudent self-interest to one of moral self-restraint. For an exhaustive treatment of *sophrosyne*, see Helen North, *Sophrosyne: Self-Knowledge and Self-Restraint in Greek Literature* (Ithaca, N.Y.: Cornell University Press, 1966). M. Dyson, "Knowledge and Hedonism in Plato's *Protagoras*," *Journal of Hellenic Studies* 96 (1976), pp. 32–45, develops the moral considerations in the *Protagoras* in terms of what he calls "psychological hedonism" and emphasizes the basic thesis that an individual will not voluntarily do anything inconsistent with his own perceived self-interest, a theme

treated in Chapters III, IV, and VII herein in connection with the frequently debated question of whether anyone can voluntarily be unjust to himself (i.e., voluntarily do anything inconsistent with his own self-interest).

12 Adkins, *Merit and Responsibility*, p. 72, points out that by Hesiod's time *arete* had become associated with material, rather than primarily military success.

13 John Burnet, *Greek Philosophy* (London: Macmillan, 1953, p. 173), emphasizes that the "art of managing states and families rightly," which the sophists professed to teach, was "in fact, what we call efficiency." A. D. Winspear, *The Genesis of Plato's Thought*, 2nd ed. (New York: S. A. Russell, 1956), commented on the meaning of *arete* as efficiency in function and, more particularly, in achieving human objectives: "The word may mean either functional excellence or moral virtue. It is the 'function' of a knife to cut. Its *arete* or excellence is to cut well. . . . A horse has a function; it has also an excellence. Eyes have a function to see; they have also an excellence, keen eyesight. The 'soul' has a function—to manage, to rule, to deliberate, and so on. But if a function, then an excellence" (p. 193). And further: "Each thing in the universe, [Plato] thought, had a function. It was good, it possessed *arete* (virtue-excellence) when it performed that function well. The function, e.g. of a carving knife is to carve meat; the function of a pruning hook is to prune the vine. We should notice in each case that the reference is to the desires and needs of human beings" (p. 298). Plato's theory of the division of labor emphasizing a single role for every participant in the political economy assimilated this definition of "virtue." According to Diogenes Laertius (II.122–24), one of Simon the cobbler's "leathern" dialogues which grew out of his conversations with Socrates was on the subject of efficiency. Guthrie (*History of Greek Philosophy*, III, p. 253) suggests that it was Socrates who added a moral connotation, "something like virtue in our sense" to its original meaning of efficiency.

14 Although he does not cite the passage here quoted, Yves Urbain, "Les idées économiques d'Aristophane," *L'Antiquité classique* 8 (1939), pp. 183–200, systematically correlates many of the economic and monetary references in Aristophanes' comedies with such modern economic ideas as substitution effects, marginal utility, and supply and demand.

15 R. Hackforth, "Hedonism in Plato's *Protagoras*," *Classical Quarterly* 22 (1928), pp. 39–43, credits the idea to Plato. For other discussions of this material, see Alexander Sesonske, "Hedonism in the *Protagoras*," *Journal of the History of Philosophy* 1 (1963), pp. 73–79; and Henry G. Wolz, "Hedonism in the *Protagoras*," *Journal of the History of Philosophy* 5 (1967), pp. 205–17. John Cronquist, "The Point of the Hedonism in Plato's *Protagoras*," *Prudentia* 12 (1980), pp. 63–81, denies that Protagoras accepts an unqualified hedonism and argues that Plato and Socrates support a moral hedonism. Levi, "The Ethical and Social Thought of Protagoras," emphasizes Protagoras's qualification that hedonism is an efficient measure only if the given objective is desirable.

16 Donald J. Zeyl, "Socrates and Hedonism: *Protagoras* 351b–358d," *Phronesis* 25 (1980), pp. 250–69.

17 When Socrates and Protagoras agree that the multitude, the common people, are frequently overcome by pleasure, they are commenting on the failure of rational self-interest to predict behavior. This is the same problem confronted by Andrew Schotter, *Free Market Economics: A Critical Appraisal* (New York: St. Martin's Press, 1985), pp. 31–37, when he discusses studies which have put in question the validity of the rationality assumption (quantitatively consistent hedonism), one of the cornerstones of modern economic theory.

18 The justification of present pain in terms of future personal expectations is similar to the medieval doctrine of *lucrum cessans*, a form of opportunity cost used by the scholastics to

justify payment for future pleasures forgone because of the lending of funds. The pain of lending was measured by the forgone future pleasure to be anticipated if the money was not loaned. Payment to compensate for this pain was not considered usury, but recompense for the lost pleasure of the lender. Thus the stricture against usury was neatly avoided. This doctrine was also used for the same purpose by medieval Moslem theologians.

19 The only addition to Plato's list of hedonic considerations made by Bentham is the element of duration of pleasure or pain. See *Principles of Morals and Legislation* (1780; reprint, New York: Macmillan, 1948), IV, p. 2. However, the element of duration in the measurement of pleasure (and, moreover, in a context of diminishing returns) is raised in Xenophon's *Hiero* (I.17–19). See Chapter III.

20 Plato frequently used a commercial metaphor to illustrate his notion that wisdom is the only true "coin" to be used in the barter or exchange of pleasures and pains, for example at *Phaedo* 69a; *Protag.* 313c–314a; Soph. 224b–e. On Plato's use of the commercial metaphor, see J. V. Luce, "A Discussion of *Phaedo* 69a6–c2," *Classical Quarterly* 38 (1944), pp. 60–64; and Paul W. Gooch, "The Relation Between Wisdom and Virtue in *Phaedo* 69a–c3," *Journal of the History of Philosophy* 12 (1974), pp. 153–59. J. C. B. Gosling and C. C. W. Taylor, *The Greeks on Pleasure* (Oxford: Clarendon Press, 1982), pp. 88–91, also discuss the *Phaedo* passage and note the reference to the maximization of pleasure by abstaining from some in order to enjoy others. Wesley C. Mitchell discussed Bentham's development of an indifference equilibrium between the various comparatives of pleasure and pain with specific emphasis on the need to work out a system of measurement. Bentham settled on a monetary measure which can be applied to both psychic and mercantile phenomena. See Mitchell's *The Backward Art of Spending Money and Other Essays* (New York: McGraw-Hill, 1937), pp. 186–87.

21 Frank H. Knight, in discussing the measurement of efficiency, pointed out that efficiency in the physical world is always 100 percent due to the indestructibility of matter. The social concept of efficiency, however, as he also pointed out, involves a value criterion or some human premium in terms of which results are evaluated as efficient. Economics, he notes, is "largely taken up" with "the problem of measuring values." See Knight's "Social Economic Organization," in *Readings in Microeconomics*, ed. William Breit and Harold M. Hochman (New York: Holt, Rinehart & Winston, 1968), pp. 3–19; reprinted from *The Economic Organization* (New York: Harper & Row, 1933), pp. 3–30.

22 The principle that individuals deviate from a standard of rational utility only through ignorance was resurrected by Bentham, obviously from Plato. See *Principles of Morals and Legislation*, I, p. 13. Although Bentham assimilated the eighteenth-century conviction that rationality is a *natural* endowment of mankind, he inconsistently maintained that deviations from natural, rational deductions of utility are explainable as error which can be corrected by instruction. He avoids the apparent dilemma with the argument that utility is the estimate of enlightened individual and social conduct. In Section 14, ten arguments are developed to convince the doubter that the principle of utility, the maximizing of pleasure, is the only measure of both morally and functionally correct behavior for the individual and society where the greatest utility is to be accomplished through the principle of the greatest happiness for the greatest number. Plato may be characterized as having as much faith in rationality as did Bentham, but he relied upon an administrative elite to bestow rationality on, or to draw it out of, the "majority." This is illustrated in the *Meno* (82a ff.), where Socrates is able to elicit a latent knowledge of geometry from an ignorant slave boy. Protagoras had

a more noncommittal, positivistic view of the validity of individual perceptions and their social compilation, judging from his views presented in the *Theaetetus*.

23 The theory that proper weighing will result in sound conclusions and that poor judgment as to choices of pleasures and pains is a result of error is a doctrine that was also expounded by Democritus. See Burnet, *Greek Philosophy*, p. 200.

24 See the discussion of the "political economy of warfare" in Chapter V, where the point is made that the ancient Greeks regarded piracy, raiding, warfare, and the taking of booty as normal economic enterprises. See also David Pears, "Courage as a Mean," in *Essays on Aristotle's Ethics*, ed. A. O. Rorty (Berkeley and Los Angeles: University of California Press, 1980), pp. 171–87.

25 In the *Nicomachean Ethics*, Aristotle applied the hedonic formulation to conduct with some additional distinctions regarding choice and knowledge. For a discussion of its use by Aristotle, see Donald C. Lindenmuth, "The Treatment of Pleasure and Pain in Aristotle's *Nicomachean Ethics*" (Ph.D. diss., New School for Social Research, 1980).

26 For a survey of this literature, see S. Todd Lowry, "Recent Literature on Ancient Greek Economic Thought," *Journal of Economic Literature* 17 (1979), pp. 65–86.

27 W. Stark, in his introduction to *Jeremy Bentham's Economic Writings* (London: George Allen & Unwin, 1952), takes no account of the classical Greek influence on Bentham.

28 *Merit and Responsibility*, pp. 164–65.

29 Ibid., p. 176.

30 In Xenophon's *Banquet* (VII.1–5), Socrates advises a Syracusan impresario on the microeconomic efficiencies which would result from reducing the risks and efforts of his performers while at the same time maximizing the pleasure given to the audience. See Chapter III for a more detailed discussion of this passage.

31 Bruno Snell, *Discovery of the Mind*, p. 162, mentions that the concept of *sophrosyne* had a "function similar to the calculation of profit," which, he says "we might call a practical appreciation of definite quantities" in which "knowledge is the court of appeal before which morality must render its account." For a discussion of the meaning of *sophron* as "safe thinking" rather than as prudence or moderation, see Hugh Lloyd-Jones, *Justice of Zeus*, p. 53. See also Helen North, *Sophrosyne*. Friedrich Solmsen, *Intellectual Experiments of the Greek Enlightenment* (Princeton, N.J.: Princeton University Press, 1975), alludes (p. 8) to a "calculus of advantages" in his discussion of the emergence of sophist rationalism in the fifth century.

III *Xenophon and the Administrative Art*

1 *The Common Sense of Political Economy* (1910; reprint, New York: Augustus M. Kelley, 1966), p. 17.

2 George Sarton included Xenophon in his *A History of Science: Ancient Science Through the Golden Age of Greece* (Cambridge, Mass.: Harvard University Press, 1960), calling the *Cyropaedia* "one of the golden books of world literature" (p. 459). Roman gentlemen, he says "studied hunting, domestic economy, ethics and government in Xenophon's books" and "English gentlemen of the period 1530–1630 read the *Cyropaedia* and tried to find in it the solution of their own problems" (p. 466). John Ruskin sought to resurrect Xenophon's economic writing as a "classic" relevant for the nineteenth century. He cited Xenophon's as "a faultless definition of wealth" containing an "explanation of its dependence for efficiency on

the merits and faculties of its possessor," a definition which Ruskin thought "must be the foundation of all true Political Economy." See *Bibliotheca Pastorum*, I: *The Economist of Xenophon*, ed. John Ruskin (London: Ellis and White; Kent: George Allen, 1876), p. xxxix. For a summary of the impact of Ruskin's criticisms of conventional political economy, see John T. Fain, *Ruskin and the Economists* (Nashville, Tenn.: Vanderbilt University Press, 1956). W. E. Higgins's *Xenophon the Athenian* (Albany: State University of New York Press, 1977) is aimed at overcoming the current assessment of Xenophon as an inconsequential source for understanding the Greek world. See J. K. Anderson, *Xenophon* (London: Duckworth, 1974), pp. 1–8, for a summary of Xenophon's influence on Roman and English education.

3 P. 54.

4 See Finley's *The Ancient Economy* (Berkeley and Los Angeles: University of California Press, 1973) and his review of *Xenophon: Économique*, cited earlier. A second edition of *Ancient Economy* was published in 1985, to which is appended an additional chapter entitled "Further Thoughts (1984)." In it, he answers the charges of selected critics. Otherwise, the second edition is like the first except for what are described in the preface (p. 10) as "some seventy-five corrections and alterations."

5 "Xénophon économiste," in *Hommages à Claire Préaux* (Brussels: Univ. libre de Bruxelles Fac. de Philos. & Lettres 62, 1975), p. 70. Samuel, *From Athens to Alexandria*, p. 24, agrees with Mossé on this point.

6 *History of Management Thought* (Englewood Cliffs, N.J.: Prentice-Hall, 1968), pp. 18–19.

7 As an example of the widespread interest in the older concepts encompassed by the term *economics*, Josef Soudek has recorded that 219 fifteenth-century hand-written copies and fifteen printed editions of Bruni's translation of the [Pseudo-] Aristotelian *Oeconomica* still survive. See his "Leonardo Bruni and His Public: A Statistical and Interpretative Study of His Annotated Latin Version of the [Pseudo-] Aristotelian *Economics*," in *Studies in Medieval and Renaissance History*, ed. William M. Bowsky (Lincoln: University of Nebraska Press, 1969), V, pp. 49–136.

8 A. Momigliano, *The Development of Greek Biography* (Cambridge, Mass.: Harvard University Press, 1971), p. 55.

9 Charles Davenant, *Discourses on the Publick Revenues and the Trade of England* (London: Printed for James Knapton at the Crown in St. Paul's Church-yard, 1698), p. 8.

10 Review of *Xenophon: Économique*, p. 252.

11 On the distinctive features of Greek education, see H. I. Marrou, *A History of Education in Antiquity*, trans. George Lamb (New York: Sheed and Ward, 1956).

12 This was noted by G. E. R. Lloyd, *Polarity and Analogy: Two Types of Argumentation in Early Greek Thought* (Cambridge: Cambridge University Press, 1966), pp. 387–88.

13 See also VI.68 and VII.63 and Xenophon's *Cyropaedia* (VII.1.22), where Cyrus tells his troops that their expertise will make laughing stocks of the enemy. That Pericles had a broader perspective more consonant with the modern emphasis on the material component is illustrated by his assertion (Thuc.II.13) that success in war depends on "conduct and capital."

14 A. A. Trever, *A History of Greek Economic Thought*, p. 91, noting this anthropocentrism, observed that "Aristotle struck the keynote in Greek economic thought in stating (*Pol.* 1259b18–21) that the primary interest of economy is human beings rather than inanimate property." This is also made clear in the [Pseudo-] Aristotelian *Oeconomica* (I.5, 1344a20), where it is stated that "of possessions, that which is the best and the worthiest subject of

economics comes first and is most essential—I mean, man." Joseph A. Schumpeter embraced the spirit of this anthropocentric tradition by making the "daring" and "innovating" entrepreneur an integral part of his theory of business cycles and capitalist development. See his *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process* (New York: McGraw-Hill, 1939); and Simon Kuznets's searching review, "Schumpeter's Business Cycles," *American Economic Review* 30 (1940), pp. 257–71.

15 In the *Gorgias* (483b–e), it is asserted that the exceptional young, "the young lions," should receive special education.

16 Houses, for example, should be oriented so as to take advantage of the sun in winter but shaded in summer (*Oec.* IX.4; *Mem.* III.9–10).

17 Some recent economic studies have returned to this focus on the importance of the human variable in the economic process. Drawing lessons from America's "best-run companies," one study advises entrepreneurs to treat people—"not capital spending and automation"—as the primary source of productivity gains. See Thomas J. Peters and Robert H. Waterman, Jr., *In Search of Excellence* (New York: Harper & Row, 1982), p. 238. S. Todd Lowry, "The Classical Greek Theory of Natural Resource Economics," *Land Economics* 41 (1965), pp. 204–8, discusses Xenophon's reliance upon the human factor as the primary resource.

18 Robert Nisbet, *History of the Idea of Progress* (New York: Basic Books, 1980), p. 46. See also Guthrie's earlier discussion of this issue (*In the Beginning*, chap. 5, pp. 80–94; and *History of Greek Philosophy*, III, pp. 60 ff., 79 ff.); and E. R. Dodds, *The Ancient Concept of Progress and Other Essays on Greek Literature and Belief* (Oxford: Clarendon Press, 1973).

19 *From Athens to Alexandria*, pp. 13, 18. Yet Starr, *Economic and Social Growth of Early Greece*, p. 4, calls attention to this period as "the most remarkable example of economic growth and structural alteration in western history." The apparent contradiction between the legacy of these events and the intellectual tenor of the fifth and fourth centuries B.C. deserves further investigation.

20 C. W. Macleod, "Thucydides on Faction (3.82–83)," in *Collected Essays* (Oxford: Clarendon Press, 1983), pp. 123–39, points out (p. 125) that in his Corcyra chapters Thucydides, by using the concept of *stasis*, traces "the undoing of human progress by the very means of that progress."

21 429–38; 535–38. Cited by Hartvig Frisch, *Might and Right in Antiquity*, trans. C. C. Martindale (Copenhagen: Glydendalske Boghandel, 1949), p. 227. Frisch indicates that Theognis followed Plato, but actually Theognis's work preceded Plato by a century or more.

22 Henry Fairfield Osborn, *From the Greeks to Darwin*, 2nd ed. (New York: Scribner's, 1929), pp. 65–66.

23 H. W. Pleket, "Technology and Society in the Graeco-Roman World," *Acta Historiae Neerlandica* 2 (1967), pp. 12–13. See also D. W. Reece, "The Technological Weakness of the Ancient World," *Greece and Rome* 16 (1969), pp. 32–47; and M. I. Finley, "Technical Innovation and Economic Progress in the Ancient World," *Economic History Review*, 2nd ser., 18 (1965), pp. 29–45, reprinted in *Economy and Society in Ancient Greece*, ed. Brent D. Shaw and Richard P. Saller (New York: Viking Press, 1981), pp. 176–95. Finley combines his argument on the limited development of technology with an assertion that there was also no concept of efficiency of production in antiquity. Putting aside the question of different value objectives, he fails to consider much of the material, to be discussed below, on quantity and incentives.

24 This is supported by Finley's discussion of the heights to which the Greeks carried the art of painted pottery. He mentions ("Technical Innovation and Economic Progress in the Ancient

World," p. 31) that "these advances were all accomplished without any technical innovation, by greater mastery of the already known processes and materials, and, above all, by greater artistry."

25 Book II of the [Pseudo-] Aristotelian *Oeconomica* begins with the classification of economics into that of the king, of the provincial governor, of the city, and of the individual.

26 See the discussion of the hedonic or efficiency aspects of courage and warfare in Chapter II and the political economy of warfare in Chapter V.

27 In the introduction to the Loeb edition of Xenophon's *Memorabilia* and *Oeconomicus* (pp. xiii ff.), note is made of the similarity in phrasing used by Xenophon (*Mem.* II.1.17) and Plato (*Euthyd.* 291b) regarding the "kingly art" and it is suggested that Antisthenes may have been the common source for the term. However, in a paper, "The Historical Socrates and Athenian Democracy," delivered to the 1983 international meeting of the Conference for the Study of Political Thought at the City University of New York, Gregory Vlastos contended that Plato's conception of the "royal art" in the *Euthydemus* is radically different from that developed by Xenophon. He alleges that Plato is concerned exclusively with moral matters, while acknowledging that Xenophon's "royal art" is directed toward administrative efficiency. What Vlastos fails to clarify, however, is that the moral path laid down in Plato's "demophilic" approach to the "royal art" is designed to lead individuals to assume the duty to perform their "proper" function in the community as determined by the expert. This point will be developed in Chapter IV.

28 Demosthenes' speech "On Organization" (*Orations* XIII) stresses the importance of order in public planning. This is also discussed by James J. Buchanan, *Theorika: A Study of Monetary Distributions to the Athenian Citizenry During the Fifth and Fourth Centuries* B.C. (Locust Valley, N.Y.: J. J. Augustin, 1962), p. 36.

29 See Leo Strauss's discussion of this passage in *Xenophon's Socratic Discourse: An Interpretation of the* Oeconomicus (Ithaca, N.Y., and London: Cornell University Press, 1970), p. 87.

30 In the closing passages of the *Euthydemus* (306d ff.), Crito expresses concern to Socrates for the proper education of his older son, Critobulus. It is seldom noted that, in the opening lines of Xenophon's *Oeconomicus*, Socrates is giving instruction to Critobulus in administration (estate management or economics).

31 See also *Euthydemus* 279e–280a ff., where the advantage of placing oneself under the direction of an expert is extolled.

32 Leo Strauss translates this phrase as "when each one sees him as his own private good." *On Tyranny: An Interpretation of Xenophon's Hiero* (New York: Political Science Classics, 1948), pp. 13–14.

33 The custom of having the parties to a confrontation state their suggested resolutions was used in Athenian courts and in valuations of property. What is of interest here is its introduction in a purely administrative determination, which suggests that it had a perfectly clear status in effective administration and that it could have had its origins in good leadership procedures as well as in egalitarian negotiations.

34 In its essence, this is a materialist and rationalist, even hedonic, formulation of the thesis Plato continually repeats, that individuals only do wrong through ignorance.

35 *Mor.* VIII.2, 719E. The conversation was on the topic of "what Plato meant by saying that God is always doing geometry."

36 This approach coincides with the original meaning of the Greek word *harmonia*, as "the orderly adjustment of parts in a complex fabric" before it acquired its better-known musical connotation. See F. M. Cornford's *The Unwritten Philosophy* (Cambridge: Cambridge Uni-

versity Press, 1967), p. 19. It is clear that *harmonia* always meant *sequential* adjustments and not a simultaneous concordance, for which, according to Cornford, the Greeks used the term *symphonia*. Guthrie, *History of Greek Philosophy*, I, pp. 220–23, discusses the development and cosmological significance of the concept of *harmonia*, including its mathematical implications, in Greek thought. See Chapter VII for a discussion of the use of the harmonic proportion in Aristotle's analysis of exchange.

37 The same kind of administrative structure appeared under the Ptolemies in the Hellenistic period, where a military *strategos* and an *oikonomos* for administration of finance and commerce had parallel responsibilities to the ruler. See Martin Hengel, *Judaism and Hellenism: Studies in Their Encounter in Palestine During the Early Hellenistic Period* (London: SCM Press, 1974), I, pp. 18–19.

38 The method of inventory is described (IX.6–8) in great detail: "'When we had gone through these things,' he said, 'we then proceeded to separate our belongings according to tribes. We began first,' he said, 'by collecting whatever we use for sacrifices. After this we distinguished the woman's ornaments for festivals, the man's dress for festivals and war, bedcovers for the women's apartments, bedcovers for the men's apartments, shoes for women, shoes for men. Another tribe consisted of arms, another of instruments for spinning, another of instruments for breadmaking, another of instruments for cooking, another of the things for bathing, another of the things for kneading bread, another of the things for the table; and all these things were further divided according to whether they were used every day or only for festivals. We also set apart the expenses for each month from the amount that had been calculated and reserved for the whole year; for in this way we could better see how things would come out at the end. And when we had sorted our belongings according to tribes, we took each kind of thing to its appropriate place.'" Such orderly arrangement of household articles is referred to as the "Laconian method" in the [Pseudo-] Aristotelian *Oeconomica* (I.6.1345b1).

39 "Forethought" as an important administrative technique is also discussed in the *Cyropaedia* (I.6.15–16). When Cyrus mentions proudly to his father that he has seen to it that "men eminent in the medical profession" travel with his army to take care of the sick, his father responds, in effect, that this is not enough administrative forethought. His rejoinder is that "your responsibility for health will be a larger one than that: you must see to it that your army does not get sick at all."

40 One may speculate upon whether Mandeville's *Fable of the Bees* could have been inspired by Xenophon's imagery of the beehive as a prototype of the economy.

41 See below for further discussion on the use of prizes.

42 There is also in Xenophon's discussion of the benefits of expanding the silver mines a suggestion of increasing returns to scale derived from the characteristics of the resource base itself, rather than from increased efficiencies in the production process. See Lowry, "Classical Greek Theory of Natural Resource Economics." This point is also discussed by Barry Gordon, *Economic Analysis Before Adam Smith: Hesiod to Lessius* (New York: Harper & Row, 1975), p. 19.

43 *From Athens to Alexandria*, p. 29.

44 Nevertheless, the importance of productive as opposed to unproductive forms of property was stressed in the [Pseudo-] Aristotelian *Oeconomica* (I.6.1344b25).

45 In the *Oeconomicus* (X.12), the earth is said to give "the most goods in return to those who serve her best."

46 In the *Ways and Means* (III.3), Xenophon recommends offering prizes "to the magistrates of the market for just and prompt settlement of disputes" to facilitate commercial transactions.

He also advocates encouraging aliens to settle in Athens and observes that it "would also be an excellent plan to reserve front seats in the theatre for merchants and shipowners, and to offer them hospitality occasionally" (III.4) in recognition of their special contributions to the city. In the [Pseudo-] Aristotelian *Oeconomica* (I.4–6, 1344b15), it is contended that "it is just and beneficial to offer slaves their freedom as a prize, for they are willing to work when a prize is set before them and a limit of time is defined."

47 Note the similarity of this statement with the famous maxim, "The greatest injustice in the world is the equal treatment of unequals." Anatole France expressed the idea more bitterly: "The law, in its majestic equality, forbids the rich as well as the poor to sleep under bridges, to beg in the streets, and to steal bread" (*Le Lys rouge*, 1894). Quoted from *Familiar Quotations* by John Bartlett, ed. Emily M. Beck, 14th ed. (Boston and Toronto: Little, Brown, 1968), p. 802. See the English translation of France's book, *The Red Lily* (New York: Grosset & Dunlap, n.d.), p. 80. The issue of the equal treatment of equals and unequals was discussed by both Plato (*Laws* 757a) and Aristotle (*Pol.* 1280a). See Chapter IV for other citations and K. R. Popper, *Open Society and Its Enemies*, I, pp. 96 ff., for a discussion of the issue.

48 The importance of debate in insuring the success of community undertakings was emphasized by Pericles (Thuc. II.40).

49 This will be discussed further in Chapter V.

50 *From Athens to Alexandria*, pp. 21–22.

51 "Aristotle and Economic Analysis," *Past & Present*, No. 47 (1970), pp. 3–4; reprinted in *Studies in Ancient Society*, ed. M. I. Finley (London: Routledge & Kegan Paul, 1974). See also "Technical Innovation and Economic Progress in the Ancient World," pp. 38 ff.

52 *History of Economic Analysis*, p. 54.

53 *From Athens to Alexandria*, p. 21, n. 24, and p. 25.

54 Austin and Vidal-Naquet (*Economic and Social History of Ancient Greece*, p. 15), take a similar position.

55 "Aristotle and Economic Analysis," p. 4. See the *Wealth of Nations*, I.i (Cannan ed., pp. 4–5). The issue of whether Smith drew on the ancient Greeks for his ideas on the division of labor is discussed by Vernard Foley, "The Division of Labor in Plato and Smith," *History of Political Economy* 6 (1974), pp. 220–42, and by Paul J. McNulty, "A Note on the Division of Labor in Plato and Smith," *History of Political Economy* 7 (1975), pp. 372–78. For Foley's reply to McNulty see ibid., pp. 379–89. McNulty correctly emphasizes that Plato's theory of the division of labor, upon which Foley focused attention, was based on the concept of natural talents or skills, rather than skill acquired by specialization and organization. For further background, see Rodolfo Mondolfo, "The Greek Attitude to Manual Labour," *Past & Present* 6 (1954), pp. 1–5; Alison Burford, *Craftsmen in Greek and Roman Society* (Ithaca, N.Y.: Cornell University Press, 1972); and Stanley Diamond, "Plato and the Definition of the Primitive," in *Primitive Views of the World*, ed. Stanley Diamond (New York and London: Columbia University Press, 1964), pp. 118–41.

56 *A History of Economic Thought*, 3rd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1956), p. 371.

57 Claude Mossé, "Xénophon Economiste," pp. 170 ff., also dismisses Xenophon's discussion of specialization in the production of shoes as economic analysis in modern terms because it fails to indicate the notion of a response to market forces. She makes this point more emphatically in her treatment of Xenophon's discussion of the problems that beset coppersmiths when their excessive numbers lead to excess production and consequent reductions in price

that force some of the artisans out of the trade (*Ways and Means* IV.6). As she indicates, this discussion recognizes market forces in one direction, but fails to show any cognizance of the inverse direction of market pressures, i.e., production in response to demand.

58 *Ancient Economy*, p. 17.

59 Ronald L. Meek and Andrew S. Skinner, "The Development of Adam Smith's Ideas on the Division of Labour," *Economic Journal* 83 (1973), p. 1100.

60 Garry Wills, "Benevolent Adam Smith," *New York Review of Books* 25 (February 9, 1978), p. 41.

61 Meek and Skinner, "The Development of Adam Smith's Ideas on the Division of Labour," p. 1100.

62 Marx (*Capital*, I, p. 388) observed that in describing the food at the king's table, "Xenophon is . . . solely concerned with telling us about the way in which use-value can be produced, but he knows very well that the gradations of the division of labour depend upon the size of the market."

63 In his *Lectures on Justice, Police, Revenue and Arms* (p. 255), Smith contrasted a worker who is "a joiner, a house carpenter, and a cabinetmaker, all in one" with one who, as a result of the division of labor, "has only a simple operation to perform." Such division of labor, he observes, "confines the views of men" and is one of the "inconveniences . . . arising from a commercial spirit." That Samuel Johnson may also have understood the relation between the division of labor and the extent of the market is indicated by his description of the disparity in the level of specialization between urban and rural areas and his comment in the *Adventurer* (No. 67, 1753) that, to understand the disparity, "it is necessary to have passed some time in a distant colony, or those parts of our island which are thinly inhabited: he that has once known how many trades every man in such a situation is compelled to exercise . . . will know how to rate at its proper value the plenty and ease of a great city." *Yale Edition of the Works of Samuel Johnson* (New Haven, Conn., and London: Yale University Press, 1963), II, p. 387. It is possible that Xenophon was the common source for both Johnson and Smith since the trades used by Smith to illustrate his point parallel almost exactly those used by Xenophon, while Johnson omits such a reference.

64 *Adam Smith and the Scotland of His Day*, p. 1.

65 "Greek Influence on Adam Smith."

66 "Technical Innovation and Economic Progress in the Ancient World," p. 38. Elsewhere, Finley (*Ancient Economy*, pp. 19–20) did concede that the Roman agricultural writers (and, he thinks, probably their Greek forerunners) "do occasionally consider marketing and soil conditions and the like," but he adds that they "never rise above rudimentary common-sense observations (when they do not simply blunder or mislead)." Wesley E. Thompson, "The Athenian Entrepreneur," *L'Antiquité classique* 51 (1982), pp. 53–85, challenges the assertions of what he calls the "primitivist" or "minimalist" school (with which he classes Finley), who, he maintains, "have mishandled the evidence in drawing their negative conclusion that Athenians had no interest in productive investment to increase the output of farm or factory" (p. 58). He cites evidence that the Greeks in fact did make economic calculations. Drawing parallels with late preindustrial England, he concludes that "the British economy of the seventeenth century was closer to the Athenian than to our own" (p. 84). Thompson, however, is strangely ambivalent in his treatment of Xenophon's description of assembly-line methods of shoe production, maintaining that the procedure described involved only a limited possibility of economies of scale. Gunnar Mickwitz, "Economic Rationalism in Graeco-Roman Agriculture," *English Historical Review* 52 (1937), pp. 575–89, discusses

Columella's agricultural work (about A.D. 60), in which is found an estimation of profits to be derived from viticulture. His calculation is made on the basis of cost of land, slaves, vines, and stakes, and interest at 6 percent. Xenophon's reference (*Oec.* II.10) to the skill of the manager as a capital asset which can augment wealth by "producing a surplus," his definition of "household management" (*Oec.* IV.4) as a kind of "knowledge" that can be used to "increase households," as well as his estimate of a 2:1 increase in the productivity of well-led labor, are all indications of quantitative concern.

67 See E. Grace, "Athenian Views on What Is a Slave and How to Manage People" [English summary], *Vestnik Drevnej Istorii* No. 111 (1970), pp. 49–66.

68 *Ancilla to the Pre-Socratic Philosophers*, trans. of the Fragments in Diels, *Fragmente der Vorsokratiker*, by Kathleen Freeman (Cambridge, Mass.: Harvard University Press, 1948), p. 108.

69 *Discovery of the Mind*, p. 82.

70 In the *Oeconomicus*, the point is made that nature "doesn't show itself deceptively, but reveals simply and truthfully what it can do and what it cannot" (XX.13). This idea is extended to a concept of a benevolent if not bountiful nature with the statement, "the earth does well when it is well treated" (XX.14).

71 The reference to the power to accumulate wisdom indicates an appreciation of human capital and is one of the earliest suggestions of an idea of progress in ancient writings. See Lowry, "Recent Literature on Ancient Greek Economic Thought," pp. 75–76, and the works cited earlier in this chapter for a discussion of treatments of the Greek idea of progress.

72 In the *Protagoras* (357b–c) Plato develops the theme that individuals fail to serve their own best interests only through ignorance.

73 This assertion is elicited in a discussion between Socrates and Euthydemus. The theme of subjective use value also occurs in Plato's *Euthydemus* (280b–c; 281d; 288e–289a). Many of the economic principles analyzed in Xenophon's *Oeconomicus* are covered in detail in the [Pseudo-] Platonic *Eryxias*, including subjective use value (405–6).

74 This principle of subjective utility is reiterated in Xenophon's *Ways and Means* (IV.7) and in the *Eryxias* (405–6), as well as in Aristotle's *Politics* (1323a35–40). See William Kern, "Returning to the Aristotelian Paradigm: Daly and Schumacher," *History of Political Economy* 15 (1983), pp. 501–12, for a discussion of the passage in Aristotle in the context of contemporary treatments of the problem.

IV *Plato as Theologian of the Administrative Tradition*

1 One of Plato's most famous translators was Benjamin Jowett, Master of Balliol College, Oxford. Eventually becoming Regius professor of Greek at Oxford, Jowett had a continuing interest in political economy throughout his life and at various times gave courses in economics as well as in the classics. See Warren J. Samuels, "Benjamin Jowett's Connections with Political Economy," *History of Economics Society Bulletin* 7 (1986), pp. 33–43.

2 This was noted by C. Bradford Welles, "The Economic Background of Plato's Communism," *Journal of Economic History* 8 (1948), Supplement, pp. 107–8, who also observed that Plato found democracy "inefficient." Nearly all of Plato's works are in the form of dialogues in which Socrates usually appears in discussions with others. There has been debate over whether or not the ideas voiced by Socrates in these debates are actually Plato's. Some scholars also make a distinction in this regard between the earlier and later works. What Plato did in writing the dialogues was to create a source of information about the important

ideas of his time, frequently at the most abstract level, which could be used as teaching guides in formal and informal discussions. Our interest is in the general premises and perspectives that run fairly clearly through his work and not in whether specific ideas are properly attributable to Socrates alone or to Plato. We will therefore generally treat positions enunciated by Socrates as Plato's own. Since we are attempting to piece together a coherent statement of his ideas on administrative order, most nuances of translation are not of prime importance. For a treatment of both historical and contemporary assessments of the political and ethical ideas expressed in the *Republic*, including Plato's elitist outlook, see Cosimo Quarta, *L'Utopia Platonica: Il progetto político di un grande filósofo* (Milan: Franco Angeli Libri, 1985).

3 Diogenes Laertius IX.50. For a superior discussion of the cultural and economic forces which contributed to colonization in the earlier period (1100–650 B.C.), see Starr, *The Origin of Greek Civilization*, pp. 365–78.

4 J.-P. Vernant, *Origins of Greek Thought*, p. 128.

5 Plutarch (VIII.2, 719B) attributes to Lycurgus, the Spartan lawgiver, the substitution of geometric for arithmetic equality at the political level, since geometrical proportion, he says, "teaches us to consider justice equal (fair) but not to consider equality justice."

6 This was apparently a Pythagorean idea. According to Iamblichus, the Pythagoreans held that every man "has a duty which it is his peculiar task to perform (*oikeion*), and he will by performing it preserve the harmony of the universe." Quoted from Iamblichus's *Vita Pythagorica* (45 ff.) by A. D. Winspear, *The Genesis of Plato's Thought*, p. 87.

7 *Enter Plato* (New York: Basic Books, 1965), p. 362.

8 Those who insist on developing competencies in more than one field are to be sent away to another city (*Rep.* 398a).

9 "A Note on the Division of Labor in Plato and Smith," pp. 372–78.

10 James Bonar, *Philosophy and Political Economy*, 3rd ed. (London: George Allen & Unwin, 1922), p. 14, in discussing the *Republic*, mentioned that Adam Smith specifically rejected the notion that the division of labor results from innate differences. Smith thought differences in natural talents greatly exaggerated and, in fact, that differences in capacity were "not . . . so much the cause, as the effect of the division of labour." He added, "The difference between the most dissimilar characters, between a philosopher and a common street porter, for example, seems to arise not so much from nature, as from habit, custom, and education" (*Wealth of Nations*, I.ii [Cannan ed., p. 15]). Cannan points out that Hume shared Smith's view. For a comparison of Plato's and Smith's views, see Gloria Vivenza, "Platone e Adam Smith sulla divisione del lavoro," in *Studi in onore di Gino Barbieri* (Pisa: Novara EDIPEM, 1983), III, pp. 1573–95; reprinted in *Adam Smith e la cultura classica*, pp. 179–92.

11 "Plato and the Definition of the Primitive," p. 175. The Woods (*Class Ideology and Ancient Political Theory*, pp. 141–42) maintain that in Plato's system the *polis* "becomes by definition an organized whole in its very essence composed of parts that are related to each other according to a natural and hierarchal social division of labour based on fundamental differences and inequalities among men; and justice is nothing more than the principle of proper and natural subordination of the lower parts to the higher."

12 The question of whether one can be unjust to himself will be dealt with at greater length in Chapter VII, where Aristotle's discussion of justice in exchange in Book V of the *Nicomachean Ethics* will be considered. For a discussion of this and other Socratic paradoxes from a purely ethical perspective, see Michael J. O'Brien, *The Socratic Paradoxes and the*

Greek Mind (Chapel Hill: University of North Carolina Press, 1967), esp. pp. 57 ff., for a treatment of the ethic of self-interest.

13 It seemed to be a general problem, judging from one of Heraclitus's surviving fragments (121), apparently referring to such a self-appointed authority. "The Ephesians would do well to hang themselves, every adult man, and bequeath their City-State to adolescents," Heraclitus opines, "since they have expelled Hermodorus, the most valuable man among them, saying: 'Let us not have even one valuable man; but if we do, let him go elsewhere and live among others'" (Frg. 121, *Ancilla to the Pre-Socratic Philosophers*, p. 33).

14 The teachability of virtue is a major theme of the *Protagoras*. See also *Meno* 70 sq., 86d sq., 89c sq.; *Euthyd.* 274c; *Laws* 730e, 860d; *Rep.* VI.488b sq. In the *Eryxias* (398), the issue is correlated with rational hedonism and the subjective appraisal of utility. Whether an individual will voluntarily do wrong (or only does wrong through ignorance of "virtue") is ultimately the major issue in the *Gorgias*. For a summary of the problem, see Guthrie, *History of Greek Philosophy*, III, pp. 250–60. On the teachability of virtue as a dispute about the merits of democracy, see the Woods, *Class Ideology and Ancient Political Theory*, pp. 130 ff. Machiavelli's use of *virtù*, *fortuna*, and *necessità*, to which my colleague Delos D. Hughes called my attention, suggests the survival of the ancient success ethic, as does his emphasis on calculation and the teaching of *virtù* in perpetuating effective leadership in the state. See Friedrich Meinecke, *Machiavellianism and the Doctrine of raison d'état and its Place in Modern History*, trans. Douglas Scott (New Haven: Yale University Press, 1957), pp. 31–39. Plutarch's treatment of the teachability of virtue (*Mor.* VI.439B–440B) and his equating it with "prudence" in the management of affairs may have been the bridge between the Greek tradition and the Renaissance.

15 In his review of the Woods' *Class Ideology and Ancient Political Theory* (*Phoenix* 34 [1980], pp. 347–52), Vlastos admits the hostility of Plato and Aristotle to "participatory democracy," but denies that Socrates held such views. He relies for this position primarily on Plato's representation of Socrates' general declaration of allegiance to the laws of Athens in the *Crito* (52c1–2). Our interest in the ideas themselves does not require a distinction between which of the oligarchic views Plato attributes to Socrates are really Socrates' and which are Plato's own. As noted above, no distinction will be attempted in this work. See, for differing views, *Plato: Totalitarian or Democrat?* ed. Thomas L. Thorson (Englewood Cliffs, N.J.: Prentice-Hall, 1963).

16 On the *Republic*, see the recent commentary of Julia Annas, *An Introduction to Plato's Republic* (Oxford: Clarendon Press, 1981). E. R. Dodds's introduction to his commentary on the *Gorgias* (Oxford: Clarendon Press, 1959) provides a useful background for this dialogue.

17 This concern about time limitations in debate is also taken up in the *Theaetetus*, where Protagoras effectively defends subjective perception and the adequacy of the adversary system in the law courts. Socrates frequently chides debate opponents about the length of their discourse, insisting on short question-and-answer discussion. In the *Theaetetus*, the pattern of time constraint and the requirement that adversaries in the law courts stick to the issues are decried as forms of slavery to bureaucratic constraint unbefitting free discourse. Although Socrates insists on the freedom to wander from topic to topic, his style appears to be patterned after the public dialectic one would expect to have been generated by formal trial procedures, rather than by open debate in the public assembly.

18 According to Popper (*Open Society and Its Enemies*), I, p. 178, "The empire, the fleet, the harbour, and the walls were hated by the oligarchic parties of Athens as the symbols of the democracy and as the sources of its strength which they hoped one day to destroy." The

decisions to build a large fleet and to fortify the port of Athens with protecting "long walls" leading to the city required massive economic commitments on the part of the citizens of Athens. The political decision to commit funds to these projects was a reflection of the "embeddedness" of the economy. Even today, commitments to defense expenditures have as much economic as military significance, an indication that the economy is still significantly "embedded."

19 Socrates argues (515c–516) that even a good leader such as Pericles could not improve the ignorant masses by trying to instruct them.

20 In the *Protagoras*, Socrates appears to accept hedonism as a measure of proper conduct, but even there he substitutes moral or intellectual standards in evaluating personal pleasure for the simple physical sensation which, he says, is the standard followed by the multitude.

21 Socrates indicates that true power means the exercise of power for good ends and asks, "Do we not admit that sometimes it is better to do the things we have just mentioned, to kill men and banish and confiscate their property?" He contends, "I say it is better so to act . . . when it is a just action, worse when it is unjust" (470b–c).

22 Paul Shorey called Callicles' position the "most eloquent statement of the immoralist's case in European literature." *What Plato Said* (Chicago: University of Chicago Press, 1933), p. 154. In Aristophanes' *Frogs* (1430–35), it is suggested that "'twere best to rear no lion in the state," possibly a reference, as the translator notes, to the lion's cub in Aeschylus's *Agamemnon* (717–32). The subject of the *Frogs* is Dionysus's trip to the underworld to retrieve a moral leader, either Euripides or Aeschylus, to help protect the city from the reestablishment of arbitrary authority, most likely an allusion to Alcibiades' play for political power during his second exile.

23 K. R. Popper's contention (*Open Society and Its Enemies*, I, pp. 116 ff.) that Socrates defends the view that the state should protect the rights of the individual (the "protectionist" view), which he attributes to the sophist Lycophron, may be questioned since Socrates only points out that the naturalistic argument for aristocratic superiority based on power can also be used by the majority. Socrates ultimately relies on a moral rather than a "natural" sanction for authority. Popper contrasts the protectionist position of Socrates in the *Gorgias* (483b–f) with what he considers to be a contradictory position in the *Republic* (358e). See also R. G. Mulgan, "Lycophron and Greek Theories of Social Contract," *Journal of the History of Ideas* 40 (1979), pp. 121–28.

24 In the *Politics* (1284a6 ff.), Aristotle echoes Plato's position when he says that if one person (or a few) are "so pre-eminently superior in goodness" to all the rest "they will suffer injustice if they are treated as worthy only of an equal share; for a person of this order may very well be like a god among men."

25 Aristotle also indicated that various forms of government develop laws in accordance with the interests of those in power (*Pol.* 1279b6). We are not here concerned with analyzing any possible inconsistencies in Thrasymachus's argument but only in the ideas he expresses which lead to the analysis of whether "justice pays." For a background on Thrasymachus's relativism, see G. B. Kerferd, "Plato's Account of the Relativism of Protagoras," *Durham University Journal* 11 (1949), pp. 20–26; and W. K. C. Guthrie, *History of Greek Philosophy*, III, pp. 294–98.

26 "The Path of the Law," *Harvard Law Review* 10 (1897), p. 461.

27 *General Theory of Law and State*, trans. Anders Wedberg (1945; reprint, New York: Russell and Russell, 1961). Ralf Dahrendorf in an essay entitled "In Praise of Thrasymachus," in *Essays in the Theory of Society* (Stanford: Stanford University Press, 1968), pp. 129–50, de-

fends the cogency of Thrasymachus's argument, despite the hostile presentation of his position by Plato. He points out that Thrasymachus's point of view, based on the realities of power, is a valid analytical perspective even for contemporary political problems, and he contrasts it with equilibrium approaches. He appears to assume, however, that Socrates accepts the social compact thesis as articulated by Glaucon for purposes of debate. Dahrendorf fails to distinguish between a negotiated compact between participants, as presented by Glaucon, from the idea of an implied compact between a citizen and his state in the Hobbesian sense articulated in Plato's *Apology* and *Crito*. See Guthrie, *History of Greek Philosophy*, III, pp. 88–97, for a summary of different views on Thrasymachus's argument and citations to the literature.

28 The Woods (*Class Ideology and Ancient Political Theory*) assert that Plato's purpose in defining politics as a "specialized art" was to exclude the "non-experts" from participation in rule. They write: "At a time when artisans and craftsmen formed the mainstay of the radical democracy, and were leaving their imprint on social values, Plato borrows the ethic of craftsmanship and technical skill; he does this, however, not in order to enhance the dignity and status of the ordinary artisans and craftsmen who possess such skills, but on the contrary, by defining politics as a specialized art, to exclude these very people—and indeed all who labour for their livelihood—from the 'craft' of politics and the right to participate in self-rule" (p. 129). Further: "Plato's foundation of society on the arts becomes an argument, not for a community of equals joined in a cooperative exercise of their arts, but for a hierarchical social division of labour in which politics, like other arts, is a specialized and exclusive skill, so that there is a rigid division between rulers and ruled instead of a self-ruling community of citizens" (p. 134).

29 For a commentary and citations on the Glaucon/Adimantus exposition which follows, see Kent F. Moors, *Glaucon and Adeimantus on Justice: The Structure of Argument in Book 2 of Plato's Republic* (Washington, D.C.: University Press of America, 1981).

30 This statement of the "popular" view is very close to that of Antiphon the Sophist, a fragment of whose writings reads, "A man therefore can best conduct himself in harmony with justice, if when in the company of witnesses he upholds the laws, and when alone without witnesses he upholds the edicts of nature." *Oxyrhynchus papyrus*, from "Truth" (D.-K. 87A44), trans. Kathleen Freeman, *Ancilla to the Pre-Socratic Philosophers*, p. 147. See also the translation by J. S. Morrison in *The Older Sophists*, ed. Rosamond K. Sprague, pp. 219 ff. The edicts of nature are developed by Callicles (*Gorg*. 482c4–486d1) but, as discussed above, Socrates leads Callicles to the admission that it is natural for the majority to assert dominance over the superior individual. The Antiphon passage is discussed by G. B. Kerferd, *The Sophistic Movement* (Cambridge: Cambridge University Press, 1981), pp. 115 ff., who develops the contradiction to which Antiphon called attention between the demands of nature and the benefits to be gained from conforming, when necessary, to sovereign authority. See also Kerferd's "The Moral and Political Doctrines of Antiphon the Sophist: A Reconsideration," *Proc. of the Cambridge Philological Society* 184 (1956–57), pp. 26–29; Paul Vinogradoff, *Outlines of Historical Jurisprudence*, II, p. 29; and David J. Furley, "Antiphon's Case Against Justice," in *The Sophists and Their Legacy: Proc. of the Fourth International Colloquium on Ancient Philosophy* (Wiesbaden: Steiner, 1981), pp. 81–91. Furley (p. 90) observes that in Antiphon's analysis of justice according to nature "are the beginnings of utilitarianism . . . but only the beginnings." Adam Smith recognized that justice as the mere abstention from wrongdoing makes no positive contribution to social betterment. He therefore termed justice a "negative" virtue and contrasted it with benevolence, a "positive"

virtue. He pointed out (*Moral Sentiments* II, ii.1 [Vol. I, p. 183]) that there is no penalty for not being benevolent nor any individual reward for being just.

31 The social compact doctrine has been generally attributed to the atomists, who followed a materialist rational self-interest basis for the origin of society, rather than the more anthropological explanation of Protagoras in his myth on the origin of society, discussed below, Chapter VI. The microeconomic formulation of this doctrine is implicit in Xenophon's treatment of the transaction between the two boys with tunics of different lengths and in Aristotle's treatment of exchange in Book V of the *Nicomachean Ethics*. See for a discussion of early concepts of the origin of society Charles H. Kahn, "The Origins of Social Contract Theory," in *The Sophists and Their Legacy*, pp. 92–108.

32 The reference to justice as a midpoint corresponds to Aristotle's statement that "just action is intermediate between acting unjustly and being unjustly treated; for the one is to have too much and the other is to have too little" (*N.E.* 1133b30).

33 The modern theory of oligopoly recognizes that rational self-interest among small groups is tempered by the preference for stability and the avoidance of destructive competition through the preservation of stable market shares.

34 This issue will be discussed further in Chapter VIII.

35 The lines from Aristophanes' *Ecclesiazusae* are quoted by Hayek from B. B. Rogers's translation in the Loeb edition, III, 470–75 (p. 289), in "Dr. Bernard Mandeville," *Proc. of the British Academy* 52 (1966), p. 130. Hayek presents an effective summary of the Greek formulation of the basic problem of natural law, a problem still relevant for economic theory: "The Greek dichotomy which had governed thinking so long, and which still has not lost all its power, is that between what is natural (*physei*) and that which is artificial or conventional (*thesei* or *nomō*). It was obvious that the order of nature, the *kosmos*, was given independently of the will and actions of men, but that there existed also other kinds of order (for which they had a distinct word, *taxis*, for which we may envy them) which were the result of the deliberate arrangements of men. But if everything that was clearly independent of men's will and their actions was in this sense obviously 'natural,' and everything that was the intended result of men's action 'artificial,' this left no distinct place for any order which was the result of human actions but not of human design" (pp. 129–30).

36 VII.iii.2 (Vol. II, pp. 305–6). Smith's ambivalence between "human sympathy" and the material hedonism developed in the *Wealth of Nations* has come to be known as the "Adam Smith problem." The solution to the inconsistency, if there is one, appears to be found in the limited scope of economic life in his broader view of society.

37 Plutarch, *Life of Solon*, V.3.

38 This issue was dealt with in the *Sisyphus* fragment (D.-K. 25), attributed by some to Euripides and by others to the tyrant Critias, where it is contended that the ability of men to circumvent the laws by doing wrong in secret was remedied by the invention of gods, who can see all that men do "that there might be some means of frightening the wicked" (*Ancilla to the Pre-Socratic Philosophers*, p. 157). The fragment is discussed by Charles H. Kahn, "The Origins of Social Contract Theory," p. 97. For a discussion of Glaucon's argument, including the Gyges' ring theory, see Terence Irwin, *Plato's Moral Theory*, pp. 184–88. His extended discussion of Plato's views on justice is much more detailed but basically consistent with the general view taken in this chapter. Robert Hollander, "The Golden Ring of Gyges: A Note on the *Republic* (II 359)," *Eos* 71 (1983), pp. 211–13, deals only with the mythic significance of the Gyges story and does not develop the social ramifications discussed here.

39 This use of the perfectly unjust man as a reference base for analysis is very close to Oliver

Wendell Holmes's "bad man" theory of law, and possibly its source. A forceful formulation often used to present the problem of conduct free from the risk of detection or punishment was the illustration of a drowning shipwrecked seafarer spying a man clinging to the only plank at the scene of the wreck. This plank would only support one person. Where fear of punishment is secondary and the possibility of detection resolved by the drowning of the competitor (providing one a "ring of invisibility"), is it natural for a man to recognize the other's property rights in the plank? This illustration was used by Cicero, Hume, and Thoreau.

40 Cicero maintained a commitment to expediency as consistent with natural law in his explanation of proper conduct (*De Off.* III.8.35–36). However, in his discussion of the debate between Diogenes of Babylon and Antipater on the ethics of market behavior, his emphasis was purely on moral duty as a regulatory force. He thus failed to recognize any regulatory potential of the market process itself (ibid. III.12.49–53).

41 *Wealth of Nations*, I.ii (Cannan ed., p. 14).

42 Ibid., IV.ii (p. 423).

43 Perhaps Adimantus has in mind Antiphon, referred to above, who was put to death in 411 B.C. for antidemocratic activities in Athens.

44 The supposition is supported by the discussion in the *Anonymus Iamblichi* (D.-K. 89), a late-fifth-century B.C. tract written by a sophist in the Democritean or Protagorean tradition, on the importance of starting early in life carefully to establish a reputation for justice. It takes on more meaning in reference to Protagoras's position, discussed in Chapter VI, that justice is to be deduced from the prevailing views of the public.

45 Hesiod (*Works and Days*, 265–74) equivocally expressed both the Socratic position and the alleged popular position presented by Glaucon:

The man who does evil to another does evil
  to himself,
and the evil counsel is most evil
  for him who counsels it.
The eye of Zeus sees everything. His mind
  understands all.
He is watching us right now, if he wishes to,
  nor does he fail
to see what kind of justice this community keeps
  inside it.
Now, otherwise I would not myself
  be righteous among men
nor have my son be so; for it is a hard thing
  for a man
to be righteous, if the unrighteous man
  is to have the greater right.
But I believe that Zeus of the counsels
  will not let it end thus.

46 Frg. A (Sprague, ed., *The Older Sophists*, p. 220).

47 The argument is also similar to the one in the *Gorgias* (465d–e), discussed above, where Socrates contends that rhetoric can corrupt the search for truth in the public process.

48 Plutarch, *Lives* I, Solon, v.

49 David Sachs raised a storm of controversy among philosophers with an article entitled "A Fallacy in Plato's *Republic*," *Philosophical Review* 72 (1963), pp. 141–58, in which he charged that Socrates (Plato) himself was guilty of the very shortcoming to which Adimantus called attention, that is, of not proving that justice is the greatest good, but of only being concerned with its effects. He wrote: "Socrates confines himself to an attempt to show that being just eventuates in happiness and pleasure for the just man; that is, he praises justice solely for what he alleges are its effects" (p. 145). Furthermore, as Vlastos wrote of Sachs's controversial article, "What Sachs charges is that Socrates vitiates his proof by an illicit shift from one sense of 'justice' to another. What he starts out to show is that 'justice' as commonly understood (abstention from wrongdoing) 'pays.' What he winds up proving is that 'justice' as redefined by himself (to mean 'harmonious order in one's soul') is what 'pays.' Thus, required to show something about X, he shows it about Y, a radically different concept, concealing the shift from everyone, including himself, by redefining 'X' to mean what is named by 'Y' and putting up no argument to prove that the class of persons instantiating X and Y is necessarily the same." Review of W. K. C. Guthrie, *A History of Greek Philosophy*, IV: *Plato, the Man and His Dialogues: Earlier Period* (Cambridge: Cambridge University Press, 1975), in *Times Literary Supplement*, December 12, 1975, p. 1474. The dispute turns on the question of whether a hedonistic measure in terms of happiness is to be distinguished from a concern for the internal harmony of one's soul. For our purposes, the more important question is the cleavage between the emphasis on material benefits, on the one hand, and ethical hedonism based on either happiness or internal harmony, on the other. For a summary of the subsequent literature on the controversy, see *Plato*, II, ed. Gregory Vlastos (Garden City, N.Y.: Doubleday, 1971), and Julia Annas, "Plato and Common Morality," *Classical Quarterly* 28 (1978), pp. 437–51. In her commentary on Plato's *Republic*, Annas analyzes Thrasymachus's argument (pp. 34–58) and develops the issues involved in the "justice pays" controversy (pp. 153–69). In a subsequent article, "Socrates' Contribution to the Greek Sense of Justice," *Archaiognosia* 1 (1980), pp. 301–24, Vlastos maintains that Socrates repudiated recourse to vengeance by introducing a concept of moral self-restraint although the Greeks generally glorified vengeance, even built it into "the very image of manly excellence" (p. 303). Vlastos does not mention that the same idea, at the social level, is contained in Protagoras's view (*Protag.* 324b) that punishment as vengeance is uncivilized and that its purpose should be to discourage wrongful acts in the future. He also fails to make a distinction between the ethical individualism which Socrates associated with the elite and Protagoras's more democratic approach in making justice a social policy.

50 In the *Crito* (51d), however, Socrates accepted the authority of the state on the basis of a Hobbesian-style social compact between the ruled and the ruler, and he acquiesced to the decision of the majority as tantamount to justice by accepting the cup of hemlock.

51 Both Plato and Adam Smith commented on the physical and mental effects of manual labor, Plato referring (*Rep.* 495d–e) to "that multitude of pretenders unfit by nature [to practice philosophy] whose souls are bowed and mutilated by their vulgar occupations even as their bodies are marred by their arts and crafts." More sympathetically, Smith observed that manual labor renders the worker "as stupid and ignorant as it is possible for a human creature to become," a situation which exists, he says, "in every improved and civilized society . . . unless government takes some pains to prevent it." *Wealth of Nations*, V.i (Cannan ed., pp. 734–35). In his *Lectures on Justice, Police, Revenue and Arms*, he commented on the restricted mind of a person whose "whole attention is bestowed on the seventeenth part of a pin

or the eightieth part of a button" (pp. 255–56). Maurice Balme, "Attitudes to Work and Leisure in Ancient Greece," *Greece and Rome* 31 (1984), pp. 140–52, attributes the tradition of contempt for manual labor in ancient Greece to a few intellectuals whose writings have survived and concludes that most Athenians not only did manual labor but even considered it virtuous. A. H. M. Jones, "The Economic Basis of the Athenian Democracy," *Past & Present*, No. 1 (1952), p. 19, is in agreement on this point.

52 In the *Laws* (903b–c), Plato specifies that administrators are to be appointed to supervise activities "down to the least detail," and the craftsman is to understand that "the part he fashions" is "for the sake of the whole, to contribute to the general good, not the whole for the part's sake." For a discussion of the managerial perspective in Plato, see William F. Campbell, "Political Economy: New, Old and Ancient," *Intercollegiate Review* 12 (1976–77), pp. 67–79; and J. J. Spengler, "Kautilya, Plato, Lord Shang: Comparative Political Economy," *Proc. of the American Philosophical Society* 113 (1969), pp. 45–57.

53 R. E. Allen's analysis of the *Crito* (*Socrates and Legal Obligation* [Minneapolis: University of Minnesota Press, 1980], pp. 100–113) clarifies the generally ignored point that Plato there maintains that legal obligation is owed to authority regardless of the individual's own personal view of the justice of his act.

54 This is a very early instance of a general equilibrium formulation and parallels Parmenidean ideas. There is a conceptualized fixed total, the elements of which can be isolated by deduction. It is a nascent expression of the framework for quantitative approaches to macroeconomic analysis.

55 Prior to the Keynesian reconsideration, the assumption of consistency between micro- and macroeconomic interests was seldom questioned, a famous expression of the view having been the ill-advised statement of Charles Wilson that "what's good for General Motors is good for the country."

56 The blandishments of the democratic processes liable to seduce the "best endowed souls" are pictured when "the multitude are seated together in assemblies or in courtrooms or theaters or camps or any other public gathering of a crowd, and with loud uproar censure some of the things that are said and done and approve others, both in excess, with full-throated clamor and clapping of hands, and thereto the rocks and the region round about re-echoing redouble the din of the censure and the praise." Socrates asks, "In such case how do you think the young man's heart, as the saying is, is moved within him? What private teaching do you think will hold out and not rather be swept away by the torrent of censure and applause, and borne off on its current, so that he will affirm the same things that they do to be honorable and base, and will do as they do, and be even such as they?" (492b–c).

57 It may be similar to the "civic purging" of the *Laws* (735d–e), where the "best method of all" is death or exile, while the "milder method of purgation," to be directed against the restless have-nots, is to be "sent abroad as a 'measure of relief.'" In the *Statesman* (293d), the Eleatic Stranger says the expert statesman "may purge the city for its better health by putting some of the citizens to death or banishing others." "They may lessen the citizen body," he adds, "by sending off colonies like bees swarming off from a hive."

58 A colleague, Delos D. Hughes, suggests that "the death of Socrates is such a compelling scene to us because it presents a true dilemma—two contradicting goods. Socrates resolves the contradiction by sacrificing one value which led him to affirm the superiority of the other."

59 Martin P. and Naomi H. Golding, "Population Policy in Plato and Aristotle: Some Value Issues," *Arethusa* 8 (1975), p. 346.

60 *Discovery of the Mind*, p. 183.

61 Richard Kraut (*Socrates and the State*) argues against traditional interpretations of passages from the *Crito* (e.g., 51b–c) connoting a theme of "obey or persuade" (i.e., successfully convince) and instead proposes a meaning with similarities to the modern doctrine of civil disobedience. See also R. E. Allen, *Socrates and Legal Obligation*; G. X. Santas, *Socrates: Philosophy in Plato's Early Dialogues* (London: Routledge & Kegan Paul, 1979); A. D. Woozley, *Law and Obedience: The Argument of Plato's Crito* (Chapel Hill: University of North Carolina Press, 1979); and N. D. Smith and T. C. Brickhouse, "Socrates and Obedience to the Law," *Apeiron* 18 (1984), pp. 10–18. In his review of Kraut's book ("Reasons for Dissidence," *Times Literary Supplement*, August 24, 1984, pp. 931–32), Vlastos calls attention to the Platonic approval of "persuasion" and dissent against "the force of law." He does not, however, note that in the context of Plato's writings such dissatisfaction is generally directed against public process and consensus by one who considers his knowledge superior to that arrived at by democratic means. Arguing against Kraut's contention that Plato was a "moral authoritarian," Vlastos compares Socrates' (Plato's) reliance on the unbridled authority of "the man who knows" with following the commands of an expert such as a doctor who "orders" one to stop smoking or risk lung cancer.

62 Plato does make the concession that the historical accumulation of laws represents a sequence of proposals accepted by the populace. Their endurance apparently confirms the expertise of their proposers; therefore convention has a certain constitutional credibility. Moreover, the tradition of obedience is vital to the stability of the state (300b–c).

63 See I. M. Crombie's excellent discussion of the naturalistic fallacy in *An Examination of Plato's Doctrines* (London: Routledge & Kegan Paul, 1962), pp. 273–75.

V *The Distribution of Shares: From Negotiation to Public Process*

1 For a standard commentary on the *Theogony*, see M. L. West, *Hesiod: Theogony* (Oxford: Clarendon Press, 1966). See also J.-P. Vernant's treatment of the Promethean myth in his *Myth and Society in Ancient Greece*, trans. Janet Lloyd (Atlantic Highlands, N.J.: Humanities Press; Brighton, Sussex: Harvester Press, 1980), pp. 168–85; and P. Walcot, *Hesiod and the Near East* (Cardiff: University of Wales Press, 1966). On the survival of hunting customs, see Hugh Lloyd-Jones, "Artemis and Ephigeneia," *Journal of Hellenic Studies* 103 (1983), pp. 87–102. None of these works, however, discusses the distributional aspects of the Promethean meat division.

2 On Greek sacrificial custom, see Walter Burkert, *Homo Necans: The Anthropology of Ancient Greek Sacrificial Ritual and Myth*, trans. Peter Bing (Berkeley and Los Angeles: University of California Press, 1983).

3 Sir James G. Frazer, *Folk-Lore in the Old Testament*, abridged ed. (New York: Macmillan, 1923), p. 154.

4 *History of Greek Public Finance*, I, pp. 210–11. Andreades partially follows B. Laum's *Heiliges Geld: Untersuchungen über den sakralen Ursprung des Geldes*. É. Will, "De l'aspect éthique de l'origine grecque de la monnaie," also following Laum, goes further and contends that the system for defining equivalents between sacrifices in the temple provided a valuing schema for later application to commercial exchange. Joseph Plescia, *The Oath and Perjury in Ancient Greece* (Tallahassee: University Presses of Florida, 1970, p. 12), asserts that sacrificial animals were not eaten.

5 In modern neoclassical economic theory, distribution is usually treated in terms of the al-

location by markets of returns from the productive process to the various factors of production, e.g., land, labor, and capital. The owners of these factors must then use their shares to acquire needed goods in a consumer market. In nonmonetary primitive societies or in those in which the productive system is controlled by an administrative authority, however, the distribution or allocation of shares and the dispensation of consumer goods is a single transaction in a one-stage, nonmarket process.

6 An almost exact replication of this arrangement is built into many modern two-party partnership agreements in which the party wishing to terminate the partnership must place a price upon the value of his share of the assets in the partnership. The other party is then given the option of either buying out the first party at the indicated price or selling his share to the first party at that price. This incorporates a Promethean system for the isolated evaluation of assets in money terms without recourse to a general market appraisal.

7 According to Onians (*Origins of European Thought*, p. 279), Zeus was not cheated in the transaction but, on the contrary, got what he wanted. He points out that the thigh-bones were thought to contain "the stuff of life" in primitive belief. Lloyd-Jones (*Justice of Zeus*, p. 33), on the other hand, accepts the premise that Zeus was cheated in this precedent-setting transaction.

8 The biblical account of Solomon's offer to divide in half the disputed infant claimed by two women is a parody of the idea of voluntarism and cardinal equality in divisions of jointly claimed assets, replete with the sword as a symbol of justice. Solomon knew that the woman who placed the highest subjective value on the baby (the mother) would voluntarily surrender her claim rather than see it divided (killed). The subtleties of the interplay of subjective value and assertion of claim in this story raise a host of jurisprudential nuances that suggest a rich but lost tradition.

9 Pritchett, *Greek State at War*, Part I, p. 83.

10 *Studies in Land and Credit* (New Brunswick, N.J.: Rutgers University Press, 1951), pp. 66–67.

11 *History of Greek Public Finance*, I, pp. 293–94. One of Demosthenes' speeches (XLII) deals with the *antidosis* procedure. In the case under discussion, there was concern over the removal of property before a valuation could be made. Paul Vinogradoff, *Outlines of Historical Jurisprudence*, II, pp. 53–55, discusses Isokrates' speech on the procedure. See also Finley, *Studies in Land and Credit*, p. 3, and Plescia, *Oath and Perjury in Ancient Greece*, p. 32.

12 Following Jaeger, Vlastos, "Solonian Justice," *Classical Philology* 41 (1946), p. 65, noted that Solon's Frg. 4 conceptualizes *justice* in the abstract as "a self-regulative order." For Solon's verse, see the J. M. Edmonds translation in the Loeb Classical Library, *Elegy and Iambus*, I (1944).

13 *The Fables of Aesop*, compiled with an introduction by Willis L. Parker (New York: Illustrated Editions, 1931), p. 145.

14 This is the Achilles' heel of the "Coase theorem" which has been so influential in discussions among economists of the social cost of regulation. While assuming the possibility of an equilibrium based solely on rational self-interest without any need for outside interference, Coase in fact relies on the unstated premise of an established system of enforceable order in terms of which negotiation takes place. The theorem was advanced in a classic article by R. H. Coase, "The Problem of Social Cost," *Journal of Law and Economics* 3 (1969), pp. 1–44. See my analysis of the problem in "Bargain and Contract Theory in Law and Economics," *Journal of Economic Issues* 9 (1976), pp. 1–22.

15 This is also the thesis of Walter Donlan, who analyzes a range of two-party exchanges in Homeric society based on Sahlins's categories of reciprocities. See Donlan's "Reciprocities in Homer," *Classical World* 75 (1982), pp. 137–75; and Marshall D. Sahlins, *Stone Age Economics* (Chicago and New York: Aldine-Atherton, 1972). According to Hugh Lloyd-Jones (*Justice of Zeus*, p. 11), the quarrel in the *Iliad* was primarily over *timē* (status) and only secondarily over property. Some writers, e.g., M. I. Finley (*Ancient History*, pp. 120–21, n. 19), following A. Aymard ("Le partage des profits de la guerre dans les traités d'alliance antiques," *Revue historique* 217 [1957], pp. 233–49), prefer to use the term *profits* rather than *booty*. For general data on the ransoming and sale of prisoners of war as booty, see Pierre Ducrey, *Le traitement des prisonniers de guerre dans la grèce antique* (Paris: E. De Boccard, 1968).

16 S. C. Humphreys (*Anthropology and the Greeks*, pp. 183–84) contends that the earliest historically valid description of ancient Greek assemblies occurs in the *Odyssey* and suggests that those described in the *Iliad* are simply "the idealization of a vague past." While this may be true, our interest is in the ideas and attitudes expressed in the Homeric literature that influenced later generations and not in the authenticity of the literature for historical purposes. Although Aristotle indicated (*N.E.* 1113a) that the Homeric assemblies were held simply to announce the decisions of the kings to the people, Thomas D. Seymour, "The Homeric Assemblies and Aristotle," *Classical Review* 20 (1906), pp. 338–39, argues that the assemblies were for deliberation, with the implicit inference that the "choice" was the people's, not the king's. He does not, however, consider the possibility that such assemblies may have been used by absolute rulers to gain the willing support of followers by involving them in discussion.

17 *History of Greek Public Finance*, I, p. 24.

18 *Origins of European Thought*, pp. 4–5. The disparity in perspective between the ancient and the at least professed modern "economic" outlook is reflected in Henry A. Ormerod's observation that "the plundering of neighbors was to the primitive inhabitant of the Mediterranean area a form of production, which was sanctioned and encouraged by the community, so long as it was directed against the people of a different tribe." *Piracy in the Ancient World: An Essay in Mediterranean History* (Liverpool: University Press of Liverpool, 1924), p. 681. Ormerod reminds us that "war of this kind is classed by Aristotle (*Pol.* 1256b) with farming, piracy, fishing and hunting as producing sustenance without the media of exchange and trade" (p. 71). See also Plato's *Euthydemus* (290b–291d), where the "general's art" suggests acquisition and the "royal art" suggests efficient utilization.

19 *Archaic Greece*, p. 130.

20 H. Bolkestein, *Economic Life in Greece's Golden Age* (Leiden: E. J. Brill, 1958), pp. 140–41. See also M. Rostovtzeff, *The Social and Economic History of the Hellenistic World* (Oxford: Oxford University Press, 1941), I, pp. 195 ff.; and George Thomson, *Studies in Ancient Greek Society*, pp. 319–23. Chaps. 3 and 4 on booty in Pritchett's *Greek State at War*, Part I, is one of the most extensive treatments of the subject I have seen.

21 "The Practical and Economic Background to the Greek Mercenary Explosion," *Greece and Rome* 31 (1984), pp. 153–60.

22 *A History of Political Economy* (1897; reprint, London: A & C Black, 1915), p. 8.

23 *Colony and Mother City in Ancient Greece* (New York: Barnes & Noble, 1964), pp. 154, 238, 242.

24 "The Ancient City: From Fustel de Coulanges to Max Weber and Beyond," *Comparative Studies in Society and History* 19 (1977), p. 321. Contra Finley, James M. Redfield, "The

Economic Man," in *Approaches to Homer*, ed. Carl A. Rubino and Cynthia W. Shelmerdine (Austin: University of Texas Press, 1983), p. 233, contends that raiding was more "a form of display" than "rational accumulation," although he alludes to Odysseus's statement (*Od.* XIV.233–34) that "his spoil made his house increase."

25 Aristotle (*Pol.* 1267a) recounts a variant of this kind of transaction. When Eubulus, the ruler of Atarneus in Asia Minor, faced an impending siege by the Persians, he contacted the Persian general and asked him to calculate the length and cost of the siege, and offered to sell him the town for "less than that amount."

26 It appears that booty was unquestionably distributed by the ancient Greeks on the basis of status but that performance could also be a factor. Andreades notes that "the king, as regards the spoils of war, had a double claim, i.e. to a share [*moera*] and to a meed or prize of honor [*geras*]" (*History of Greek Public Finance*, I, p. 28). However, the notion of "king" was used rather loosely to designate anyone from a head of a patriarchal household to a major ruler. Achilles, as does Thersites later, questions the validity of the customary double portion allotted to the leader on the ground that the leader has a lesser share in the fighting. Nestor's suggestion that the forces be divided in such a way that outstanding performance could be more easily identified is an indication that effectiveness was sometimes rewarded. Finley, *The World of Odysseus* (New York: Viking Press, 1954), pp. 77–78, contends that the distribution of booty was based on customary value ratios between goods and that, in this sense, the division had to be equitable. Bruno Snell (*Discovery of the Mind*, p. 169) points out that, for the ancient Greeks, "Justice, *dike*, is the portion due to each member of the group." He notes, however, that there is no suggestion that "due portion" necessarily meant "equal share" among all participants of all ranks. In the *Odyssey* (XIV. 230–32), it is indicated that the leader chose his "extra portion," while the balance was distributed equally "by lot." W. Kendrick Pritchett cites evidence that in later times booty was "distributed among the troops according to each individual's particular deservings" (*Greek State at War*, Part I, p. 87, n. 19). He mentions that, in Hesiod's *Theogony* (444), the word generally used for booty there meant only "cattle," with no reference to raiding; that Athene was sometimes referred to as the goddess of booty (*Il.* X.460); and that in Athens through much of antiquity, one-tenth of all booty was dedicated to her (p. 93). Chapter 4 (Part I) of Pritchett's study deals with later methods of accounting for and disposal of booty. Herodotus reports that after the battle of Plataea in the Persian War, a tenth of the booty was set aside for the god at Delphi and other portions (unspecified) for the gods at Olympia and the Isthmus. Each soldier then received "his due." The Greek commander, Pausanias, "was granted ten of everything." Herodotus observes, "There is no record of any special awards for distinguished service in the battle, but I imagine that they must have been made" (IX.82). One wonders how booty as varied as that taken at Plataea could have been equitably divided. Here is Herodotus's description of the spoils: "Treasure was there in plenty—tents full of gold and silver furniture; couches overlaid with the same precious metals; bowls, goblets, and cups, all of gold; and wagons loaded with sacks full of gold and silver basins. From the bodies of the dead they stripped anklets and chains and golden-hilted scimitars, not to mention richly embroidered clothes which, amongst so much of greater value, seemed of no account" (IX.81).

27 There is controversy among classicists about Achilles' rejection of any attempt to cast his worth in monetary terms when, in Book IX of the *Iliad*, he rejects Agamemnon's proffered settlement of their dispute in the form of an additional share of the booty. See Adam Parry, "The Language of Achilles," in *The Language and Background of Homer: Some Recent Studies and Controversies*, ed. G. S. Kirk (Cambridge: W. Heffer, 1964), pp. 48–54; M. D. Reeve,

"The Language of Achilles," *Classical Quarterly* 23 (1973), pp. 193–95; and James M. Redfield, *Nature and Culture in the Iliad: The Tragedy of Hector* (Chicago: University of Chicago Press, 1975). For a new, authoritative commentary on the *Iliad*, see G. S. Kirk, ed., *The Iliad: A Commentary* (Cambridge: Cambridge University Press, 1985). Only the first volume, covering Books 1–4 of this projected six-volume work, had appeared at this writing.

28 In Sophocles' *Antigone* (659–76), Creon speaks of the absolute and practical necessity of obedience to the "least command" of the leader in authority "when it is right, and even when it's not."

29 This and similar references to "crooked-counselling Cronos" deserve further study. Cronos or Saturn is the most regular of the planets and, in many cultures, was represented as the god of justice and measurement because of his orderly conduct. What is meant by the term translated as "crooked-counselling" is a problem for philologists deserving attention in terms of the logic of context and tradition, but it seems apparent that, without a proper appreciation of the role of the balance as a symbol of just measurement in the determination of justice by an administering god, an adequate distinction cannot be made between words meaning crooked in the sense of "sinuous" and crooked in the sense of "slanting," as in a description of a picture hanging crookedly on a wall. The image of such an administrative god dispensing judgments and advice, based upon his readings of the slant of his balance as he weighs the elements being considered, is too much a part of the Eastern Mediterranean tradition to be ignored. Zeus makes such a "slanting" determination when he weighs the fates of Hector and Achilles in his golden scales and finds Hector's fate the heavier (*Il.* XXII.184–208, 209–35). See Giorgio de Santillana and Hertha von Dechend, *Hamlet's Mill: An Essay on Myth and the Frame of Time* (Boston: Gambit, 1969), p. 136 and the index, for extensive citations on the philology and cultural history of Cronos and Saturn.

30 I. F. Stone has noted that this passage, which asserts one-man rule against the rule of many, was omitted from Xenophon's report in the *Memorabilia* (I.2.58 ff.) of the lines from Homer that figured in the accusations in the trial of Socrates. The passage repeats the authoritarian premise that was apparently part of the antidemocratic rhetoric of the fifth century B.C. and was restated in Plato's *Republic* and *Statesman*. See "I. F. Stone Breaks the Socrates Story," *New York Times Magazine*, April 8, 1979, pp. 22–68.

31 Plato also could not resist denigrating Thersites on the basis of his appearance, referring to him, among others drawing lots in the afterlife, as "the buffoon Thersites clothing itself in the body of an ape" (*Rep.* 620c).

32 Francis Cairns calls attention to the fact that the echoing by Thersites of Achilles' words, like Thucydides' report (II.60.1–64.5) of Cleon's repetition of Pericles', was a standard literary technique for indicating that status, rather than cogency of argument, was determinative of the worth of the speaker's words. See his "Cleon and Pericles: A Suggestion," *Journal of Hellenic Studies* 102 (1982), pp. 203–4.

33 For a general discussion, see A. Momigliano, "Freedom of Speech in Antiquity," *Dictionary of the History of Ideas* (New York: Scribner's, 1973), II, pp. 252–63.

34 Havelock surmises that Achilles' statement as he threw down the staff refers to the vesting of authority in the hands of a council of elders, opposing a conflicting tradition of authority in the hands of an absolute ruler (*Greek Concept of Justice*, p. 99).

35 On the symbolism of the scepter in the *Iliad*, see Jasper Griffin, *Homer on Life and Death* (Oxford: Clarendon Press, 1980), pp. 9–12. He describes the use of the scepter as a symbol of regal authority but does not elaborate on its transformation into a symbol also of community authority. The extremely wide use of objects such as staffs, scepters, sticks, and the like

for ceremonial purposes, especially in nonliterate societies, as symbols of authority (the king's staff or scepter) or reverence (the doctor's or magician's staff) deserves a systematic analysis. F. J. M. de Waele's *The Magic Staff or Rod in Greco-Italian Antiquity* (Ghent: Drukkerij Erasmus, 1927) is the only work on the subject of which I am aware. One illustration in later times of the symbolic use of such an object was the Anglo-Saxon *wed* ceremony, sometimes correlated with Roman legal transactions. Burton F. Brody describes the ceremony: "The *wed* was a stick; in the case of a private treaty it could easily have been the slayer's spear. Its delivery uniquely symbolized the slayer's assent to fulfill his obligation to pay the *wergeld* and, therefore, the aggrieved relatives could forgo their revenge with confidence." "Anglo-Saxon Contract Law: A Social Analysis," *DePaul Law Review* 19 (1969), p. 278.

36 Pericles emphasized this point in his funeral oration (Thuc. II.40) when, in explaining the importance of debate in the Athenian democracy, he said that "acts are foredoomed to failure when undertaken undiscussed."

37 I am grateful to Dr. C. B. R. Pelling for calling this example to my attention.

38 Agamemnon, however, reverses his decision about the booty, perhaps in response to the pressures of public opinion and the exigencies of warfare, and (perhaps symbolically) speaks from his place in the audience rather than before the assembly in making his retraction.

39 *Greek Concept of Justice*, pp. 135, 352, n. 13. My colleague Herman W. Taylor, Jr., points out that the primitive meaning of the stem is not "say" so much as "show" and that the English word *teach* is from the same root. See also Lloyd-Jones, *Justice of Zeus*, p. 166, n. 23. J. Walter Jones (*Law and Legal Theory of the Greeks*, p. 27) attributes the derivation of the concept of justice in Hesiod to the idea of the "straight" and "evenly balanced" course. He points out that the word "which later came to mean the auditing of the balance of the accounts of out-going officials, was early used to denote the process of straightening out crooked judgments." A. D. Winspear (*Genesis of Plato's Thought*, pp. 39–44) discusses the changing meaning of the term from Homer to Hesiod as ethical connotations began to be added to its original naturalistic sense of "norm" or "custom." George M. Calhoun, *Introduction to Greek Legal Science*, ed. Francis de Zulueta (Oxford: Clarendon Press, 1944), p. 63, contends that *dike* originally connoted "way," while Hartvig Frisch (*Might and Right in Antiquity*, p. 43), following Hirtzel, connects the meaning with "the staff which the judges bear and which . . . they originally threw down between the litigants to act as a dividing line." George Thomson (*Studies in Ancient Greek Society*, p. 134), identifies the root meaning with "path" and associates it with "pointing out" or "showing the way."

40 *Greek Concept of Justice*, p. 137.

41 Ibid., p. 138.

42 John Gould, "*Hiketeia*," *Journal of Hellenic Studies* 93 (1973), pp. 93–94.

43 F. Solmsen, "The 'Gift' of Speech in Homer and Hesiod," *Trans. and Proc. of the American Philological Assn.* (1954), pp. 1–15, discusses military and rhetorical prowess as the dual bases for status in Homeric society and takes note of the emphasis on cogency as well as style and appearance in argument. Citing Phoenix's description of the importance of training in speech in the education of the hero (*Il.* IX.442–43), Parry, "The Language of Achilles," p. 51, suggests that in Homeric times formal speech followed certain formulaic patterns assumed to coincide with reality. Thomas R. Fitzgerald, "Homer and Greek Freedom of Speech," *Classical Bulletin* 37 (1961), pp. 87, 89–90, discusses passages in the *Iliad* and *Odyssey* which give clues to the use of public speaking in the Greek assembly, concluding

that it was a limited prerogative. In the Greek *polis*, according to Vernant (*Origins of Greek Thought*, pp. 49–50), "speech became the political tool par excellence, the key to all authority in the state, the means of commanding and dominating others." "The art of politics," he asserts, "became essentially the management of language." S. C. Humphreys (*Anthropology and the Greeks*, pp. 179 ff.) distinguishes between freedom of speech in religious and in political matters and traces the ancient tradition of formal debate.

44 R. I. Winton and Peter Garnsey, "Political Theory," in *The Legacy of Greece: A New Appraisal*, ed. M. I. Finley (Oxford: Clarendon Press, 1981), p. 44. R. G. A. Buxton, *Persuasion in Greek Tragedy: A Study of Peitho* (Cambridge: Cambridge University Press, 1982), presents an extensive survey of the Greek concept of *peitho* (persuasion) not only as revealed in literary sources but also in social and political discussions. He identifies the link between persuasion and democracy (p. 10); notes that the growth of argument was tied to the rise of the *polis* (p. 8); and makes the point that reliance on persuasion implies agreement to exclude the use of violence in favor of debate in achieving objectives (p. 14). J. S. Morrison, "An Introductory Chapter in the History of Greek Education," *Durham University Journal* 41 (1949), p. 62, finds "the earliest traces of a formal art of speaking" in Aeschylus's *Eumenides*.

45 *The Greeks and the Irrational* (Boston: Beacon Press Paperback, 1957), p. 18.

46 Finley, *World of Odysseus*, p. 78. Martin Ostwald, *Nomos and the Beginnings of the Athenian Democracy* (Oxford: Oxford University Press, 1969), connects the evolution in ancient Greece of the term *nomos* for "statute" with the recognition of consensus and usage (as opposed to edict) as sources of law and thus with the beginnings of Athenian democracy. Guthrie, *History of Greek Philosophy*, III, pp. 119–31, has a useful discussion of the unwritten law.

47 Thomson, *Studies in Ancient Greek Society*, p. 341, describes the role of the Furies and the use of the oath by Rhadamanthys. See also Plato, *Laws* 948b–c.

48 Thuc. II.13.

49 The distribution of the income from the Athenian silver mines to the citizens was an example of such sharing, and illustrates the difficulty of accumulating any state surplus. S. C. Humphreys, *Anthropology and the Greeks*, p. 145, mentions that in the fifth century distributions were limited to payments for civic services. However, "the distribution of the surplus was revived in the fourth century in the *theorikon*, which came to be the major symbol of participation in the state's profits—a barometer of the state of public finance, and a political right fiercely guarded against attempts to spend the surplus elsewhere. Demades called it 'the glue of democracy': it symbolised the fusion of collective and individual income."

50 "De l'aspect éthique de l'origine grecque de la monnaie," pp. 213 ff.

51 Havelock's discussion (*Greek Concept of Justice*, pp. 133 ff.) of this incident, supported by his philological analysis, brings out very clearly the sense of two-party process in this resolution of a secular dispute.

52 The incident raises the same issue later posed by Plato in the *Republic*: whether justice pays, that is, whether a man can exploit his public reputation for integrity while being secretly unjust.

53 Jones, *Law and Legal Theory of the Greeks*, p. 218.

54 *Oath and Perjury in Ancient Greece*, p. 58.

55 According to S. C. Humphreys (*Anthropology and the Greeks*, pp. 200 ff.), the large extended family unit of the *oikos* had been reduced to a nuclear family organization as early as

Homeric times with the development of urbanization, although its economic and social role persisted into classical times. This, however, could still include what would be an extended family in modern terms.

56 Two situations in which distribution of economic assets occurred outside the framework of the *oikos* and thus involved individual claims were in the distribution of booty between leaders of family groups who participated in raids and in the distribution of assets through inheritance when an *oikos* was broken up on the death of the patriarch. Distribution of inheritance, as of booty, was sometimes by lot based on a variant of the "divide and choose" pattern of the Promethean transaction. In the *Works and Days*, an administrative authority, a "gift-devouring judge," apparently divided the family property, unfairly Hesiod thought, between himself and his brother.

57 *World of Odysseus*, p. 70.

58 Ibid.

59 George Thomson, *Studies in Ancient Greek Society*, pp. 312–13, discusses survivals of joint holdings in Greek peasant agriculture which up to the last century apparently resembled the *oikos*, with brothers holding in common.

60 "Polity and Society," in *A Companion to Homer*, ed. Alan J. B. Wace and Frank H. Stubbings (London: Macmillan, 1962), p. 439.

61 Euripides' *Suppliant Women* is built around the theme of the ruler's duty of compassion to suppliant strangers, tempered by his concern for the interests and support of his own people. This is also the theme of Aeschylus's *Suppliant Maidens*. These two tragedies have the same title, *Hiketides*, in Greek. Gould's "*Hiketeia*," cited earlier, is an engrossing treatment of the ritual of supplication, but concentrates mainly on pleas for protection and assistance rather than on the broader aspects of hospitality.

62 Redfield, "Economic Man," pp. 244–45, characterizes the *Iliad* as "a poem of public life, in which private relations are important for their public consequences." He describes the *Odyssey* as "a kind of handbook of economic life" and "a poem of economics" because its hero is "driven by economic motives and by his commitment to economic institutions." Useful discussions of the Homeric works are contained in C. M. Bowra, *Tradition and Design in the Iliad* (1930; reprint, Westport, Conn.: Greenwood Press, 1977); and Denys Page, *The Homeric Odyssey* (Oxford: Clarendon Press, 1955). Neither, however, is the source of the line of interpretation followed here.

63 *History of Greek Public Finance*, I, p. 10.

64 Ibid. See Glotz's *La solidarité de la famille en Grèce*, pp. 98–99.

65 The possible matriarchal origins of the unwritten law of hospitality have apparently not been explored, although Finley (*World of Odysseus*, p. 103) alludes to vestiges of a matriarchal system in Penelope's household and among the Phaecians. When Odysseus was washed up on the shores of Phaecia, hospitality was initially extended by a daughter of a leading family and she advised him to go past her father and to appeal to her mother for hospitality (*Od.* VI.313–15). The role of the Furies in enforcing the unwritten laws may suggest their connection with what Adkins calls the "quiet virtues" of the matriarchal tradition.

66 See the following for general discussions of the guest-friend relationship: T. J. Haarhoff, *The Stranger at the Gate: Aspects of Exclusiveness and Cooperation in Ancient Greece and Rome* (London: Longmans, Green, 1938), pp. 126 ff; D. E. Belmont, "Early Greek Guest-Friendship and Its Role in Homer's *Odyssey*" (Ph.D. diss., Princeton University, 1962); and Snodgrass, *Archaic Greece*, pp. 132–33.

67 *World of Odysseus*, p. 118. Walter Donlan, "The Politics of Generosity in Homer," *Helios* 9

(1982), pp. 1–15, discusses the "political economy of the epics," emphasizing the economic importance of the guest-friend relationship in gift exchange and the redistributive role of the chieftain in Homeric society, which he characterizes as an "immature chiefdom."

68 *Greek Concept of Justice*, pp. 70–71. See also pp. 155–56, 163, 177.

69 *N.E.* 1136b.10–15. Interpretations of the disparity in the exchange have varied from Plato's allusion to it as an unfair bargain (*Symp.* 219a) to modern explanations alleging (1) humor or burlesque; (2) the cowardice of Glaucus in buying off his opponent; and (3) the principle of potlach whereby individuals maintain prestige by the magnificence of their gifts. William M. Calder III, "Gold for Bronze: *Iliad* 6.232–36," in *Studies Presented to Sterling Dow on His Eightieth Birthday* (Durham, N.C.: Duke University Press, 1984), pp. 31–35, citing but not elaborating the nuances of gift exchange developed by Mauss, discussed below, examines these varying interpretations and suggests his preference for the last, which he thinks is a Mycenaean survival.

70 *Wealth of Nations*, I.iv (Cannan ed., p. 23). For an assessment of comparative economic values in the *Iliad*, see A. Lily Macrakis, "Comparative Economic Values in the *Iliad*: The Oxen-Worth," in *Studies Presented to Sterling Dow*, pp. 211–15. Although she tends to lapse into inferences about "prices" from such value comparisons, Macrakis finds the Homeric data to be consistent, conservative, and convincing. See also Walter Donlan, "Scale, Value, and Function in the Homeric Economy," *American Journal of Ancient History* 6 (1981), pp. 101–17, who concludes that in the exchanges in the poems there were two tiers of value, one involving status goods and the other utilitarian ones and that the success ethic ("to win and to augment fame and influence for oneself and one's *oikos*") was a predominate motive.

71 *The Gift: Forms and Functions of Exchange in Archaic Societies*, trans. Ian Cunnison (New York: W. W. Norton, 1967), pp. 34–35.

72 John W. Bennett, "Reciprocal Economic Exchanges among North American Agricultural Operators," *Southwestern Journal of Anthropology* 24 (1968), p. 276.

73 Snodgrass discusses the emergence of individualized cultural activities. See chap. 5, "The Rise of the Individual," *Archaic Greece*, pp. 160–200.

74 Havelock (*Greek Concept of Justice*, p. 352) discusses several different translations. Contending that the wording of the passage is too vague for useful philological analysis, Glotz, *La solidarité de la famille en Grèce*, pp. 115–21, bases his explanation on what is known of ancient Greek cultural and legal customs.

75 Private arbitration, where litigants chose their own mediators, was a much older institution than the system of public arbitration used in Athens in the late fifth and early fourth century B.C. See R. J. Bonner, "The Institution of Athenian Arbitrators," *Classical Philology* 11 (1916), pp. 191–95.

76 *Greek Concept of Justice*, p. 136.

77 In the late fourth century B.C., Aristotle (*Pol.* 1268a) was still defending the system of absolute verdicts rendered by the dropping of pebbles into urns against Hippodamus's suggestion that each judge (juror) should be allowed to offer qualified verdicts written on a tablet. Traditionally such a vote was cast without discussion among the jurors, and the absolute verdict required the plaintiff to reduce his claim to a safe level since the only way the jurors could reject an excessive claim was by rejecting the claim entirely. This provided pressure toward out-of-court settlement, replicating an aspect of the Promethean transaction by encouraging claimants to propose amounts which defendants would be likely to accept.

78 The contention that two talents was too small a sum to represent a blood price on the evi-

dence that the same sum was only the fourth prize in a chariot race at *Iliad* XXIII.262–70 is cited by A. T. Murray, translator of the Loeb edition (II, pp. 324–25). Without knowing the merits of the case, the status of the litigants, or the customary blood price for homicides, such speculation is relatively useless. It may have been this very issue, the adequacy (or inadequacy) of the offered price, that was being argued by the litigants.

79 "The Primitive Forms of Legal Remedies," in *Primitive and Ancient Legal Institutions*, ed. Albert Kocourek and John H. Wigmore (Boston: Little, Brown, 1915), pp. 586–88. In *Ancient Law*, 5th ed. (New York: Henry Holt, 1873), p. 362, Maine mentions that the Roman *Legis Actio Sacramenti* required that the subject of litigation be displayed in court. If not portable, a symbolic representation of it could be used, for example a single brick might represent a house. This usage in Roman law would be consistent with the presumption that the two talents in the scene on Achilles' shield represented the subject of the dispute.

80 *Greek Concept of Justice*, p. 136. Italics mine.

81 Homer uses the balance as the symbol of the measurement of fate rather than of equilibrium when he writes of warfare, "Quickly have men surfeit of battle . . . whenso Zeus inclineth his balance, he that is for men the dispenser of battle" (XIX.207–33).

82 Heiman Knorringa, *Emporos: Data on Trade and Trader in Greek Literature from Homer to Aristotle* (Amsterdam: H. J. Paris, 1926), p. 11, supports the thesis that the woman weighing wool in the *Iliad* is not a reference to a market process.

83 The equilibrium image in Hesiod's *Works and Days* (23–24) of the beneficial strife between potter and potter and minstrel and minstrel is sometimes construed as a reference to competition in a market context. Hesiod's emphasis, however, is solely on the status of the competitors in the public eye and on the enhanced quality which contributes to public benefit, not on any pricing process. Barry Gordon (*Economic Analysis Before Adam Smith*, pp. 5–6) views Hesiod's framing of this competitive pattern as a treatment of beneficial responses to the problem of scarcity.

84 M. J. Smethurst concludes that the thesis of the *Oresteia* is that justice is a balance of opposites, that it exists as a tension in a Heraclitean sense and that this theme is not only expressed in the plot but also in the style and structure of the trilogy. "The Balance of Justice," (Ph.D. diss., University of Michigan, 1968). See also her "The Authority of the Elders: The *Agamemnon* of Aeschylus," *Classical Philology* 67 (1972), pp. 89–93; and Margaret Visser, "Vengeance and Pollution in Classical Athens," *Journal of the History of Ideas* 45 (1984), pp. 193–206, for an analysis of the twofold role of the Furies in the *Oresteia*.

85 Vlastos, "Solonian Justice," p. 69, traces the beginnings of this realization to Solon's Frg. 4.17, where he finds the implication that "a direct injury to any member of the *polis* is indirectly, but no less surely, an injury to every member of the *polis*; for, though the initial injustice affects only one or a few, the eventual effects on the common well-being imperil everyone's welfare; hence, anybody's wrong is everybody's business."

86 See, on the political implications of the *Oresteia*, the following and the literature there cited: E. R. Dodds, "Morals and Politics in the *Oresteia*," *Proc. of the Cambridge Philological Society* 186 (1960), pp. 19–31; Anthony J. Podlecki, *The Political Background of Aeschylean Tragedy* (Ann Arbor: University of Michigan Press, 1966); C. W. Macleod, "Politics and the *Oresteia*," *Journal of Hellenic Studies* 102 (1982), pp. 124–44; and K. J. Dover, "The Political Aspect of Aeschylus's *Eumenides*," *Journal of Hellenic Studies* 77 (1957), pp. 230–37. For treatments of other aspects of Aeschylus's work, see Anne Lebeck, *The Oresteia: A Study in Language and Structure* (Washington, D.C.: Center for Hellenic Studies, 1971); Brian

Vickers, *Towards Greek Tragedy: Drama, Myth, Society* (London: Longman, 1973); and Oliver Taplin, *The Stagecraft of Aeschylus: The Dramatic Use of Exits and Entrances in Greek Tragedy* (Oxford: Clarendon Press, 1977).

87 The tradition that a split decision is automatically interpreted in favor of the defendant, the so-called "vote of Athena," is alluded to by Podlecki, *Political Background of Aeschylean Tragedy*, p. 77.

88 Plescia (*Oath and Perjury in Ancient Greece*, pp. 11, 13) gives several examples.

89 Ibid., pp. 97–98.

90 Ibid., p. 93.

91 *Grundrisse: Foundations of the Critique of Political Economy*, quoted by G. E. M. de Ste. Croix, *The Class Struggle in the Ancient Greek World: From the Archaic Age to the Arab Conquests* (Ithaca, N.Y.: Cornell University Press, 1981), p. 35.

VI *Utilitarian Measurement in the Public Process*

1 A *History of Western Philosophy*, 14th ed. (New York: Simon and Schuster), p. 45.

2 J. S. Morrison, "The Place of Protagoras in Athenian Public Life (460–415 B.C.)," *Classical Quarterly* 35 (1941), p. 10. Both Morrison and A. T. Cole comment on the similarity between the ideas of Protagoras and the Anonymus Iamblichi, a writer of the late fifth or early fourth century. See Cole's *Democritus and the Sources of Greek Anthropology*, American Philological Association Monograph No. 25 (Cleveland: Western Reserve University Press, 1967), p. 8, and "The *Anonymus Iamblichi* and His Place in Greek Political Theory." Charles H. Kahn traces Greek ideas on the origin of society from the primitive condition to Archelaus and Milesian influences ("The Origins of Social Contract Theory," in *The Sophists and Their Legacy*, pp. 92–108). See also Guthrie, *In the Beginning: Some Greek Views on the Origins of Life and the Early State of Man*.

3 Lloyd-Jones (*Justice of Zeus*, pp. 94–101) discusses possible literary sources of the myth in Aeschylus's plays. Adolfo Levi mentions the recurrence of the myth in the writings of several thinkers with Abderan connections and concludes that Democritus got the myth from Protagoras. See "The Ethical and Social Thought of Protagoras," p. 289, n. 1.

4 The notion of a compensating ecology in the animal kingdom occurs also in Herodotus (III.108–9). See D. Loenen, *Protagoras and the Greek Community*, p. 4, for citations on the wide use of specific terms denoting "balance" in classical literature. J. Walter Jones (*Law and Legal Theory of the Greeks*, pp. 17–18) discusses the use of the idea in Greek literature on justice and civic order.

5 Aristotle (*Pol.* 1253a) asserts that man "alone possesses a perception of good and evil, of the just and the unjust," preconditions, according to him, of life in the family and the *polis*. Spengler refers to the same ideas when he paraphrases Cicero's view that "the sense of shame acts as a justice-producing sanction, and that in general men act from an innate sociability which develops as men grow up and which underlies justice as well as other virtues." According to Spengler, "Much of Cicero's argument is translatable into terms of Pareto's sentiments, or of Talcott Parsons' value-attitudes." See J. J. Spengler, *Origins of Economic Thought and Justice* (Carbondale and Edwardsville: Southern Illinois University Press; London and Amsterdam: Feffer and Simons, 1980), p. 110 and n. 159. Adam Smith's concept of "human sympathy" which undergirded his *Theory of Moral Sentiments* was undoubtedly derived from the Greek *aidos*, as was Henry Sidgwick's "innate instinct of benevolence."

According to Karl Pribram (*History of Economic Reasoning*, p. 293), Sidgwick's influence while at Cambridge "surpassed by far" that of any contemporary economist on late nineteenth century intellectual life.

6 Heraclitean views equating balanced strife with justice and harmony are discussed by Hartvig Frisch, *Might and Right in Antiquity*, pp. 192–94.

7 Vlastos's interpretation is that "the arts [including the "political" art] are the human counterpart to the various devices which insure the survival of animal species." See *Plato: Protagoras*, p. x. Protagoras's myth is certainly consistent with the historical development of Greek society as it has been interpreted by Starr. "If the individualistic attitude of untempered, willful passion was never entirely to die in Greek life," he writes, "it certainly was not the main source of ethical strength from the seventh century onward. The human being was driven to morality by communal pressure rather than by private fears in his own heart before the awful eye of the divine; and his rewards were conceived far more in physical than in spiritual terms" (*Origins of Greek Civilization*, p. 323).

8 *Sophocles and Pericles* (Oxford: Basil Blackwell, 1954), p. 64. Morrison, "The Place of Protagoras in Athenian Public Life," p. 14, contends that Sophocles' *Antigone* was intended to endorse Protagorean political theory which had been exemplified by Periclean leadership.

9 For a discussion of claims that Protagoras's position on this issue is contradictory (and an answer to such arguments), see Adolfo Levi, "The Ethical and Social Thought of Protagoras," pp. 293–96. See also G. B. Kerferd, "Protagoras's Doctrine of Justice and Virtue in the *Protagoras*," *Journal of Hellenic Studies* 73 (1953), pp. 43–45; and Guthrie's comment (*In the Beginning*, pp. 92 ff.). In Morrison's view ("The Place of Protagoras in Athenian Public Life," p. 7), Protagoras resolved the problem by harmonizing "the teachability of the political art with the principle of democracy."

10 George Grote, *Plato and the Other Companions of Sokrates* (London: J. Murray, 1888), II, p. 311.

11 As discussed in Chapter II, Socrates ultimately concedes the teachability of "virtue" but only in the form of hedonistic efficiency when he contends that individuals only do wrong through ignorance, i.e., behave inefficiently through lack of information. As developed in Chapter IV, however, he continued to limit the exercise of *political* virtue to the expert fulfilling his assigned role in a rigid social hierarchy. Furthermore, Socrates directs his own efforts to teaching individuals and scorns participation in the civic process.

12 A. W. H. Adkins uses *developed* in his analysis of the Protagorean perspective on *aidos* and *dike*. See his "ἀρετή, τέχνη, Democracy and Sophists: *Protagoras* 316b–328d," *Journal of Hellenic Studies* 93 (1973), p. 7.

13 Eric A. Havelock argues that Plato was equivocal in reporting Protagoras's views on the teachability of man. See chap. 5 of *The Liberal Temper in Greek Politics* (New Haven, Conn.: Yale University Press, 1957). For a critique of Havelock's work, see Leo Strauss, "The Liberalism of Classical Political Philosophy," *Review of Metaphysics* 12 (1959), pp. 390–439; reprinted in *Liberalism Ancient and Modern* (New York: Basic Books, 1968), pp. 26–64. C. C. W. Taylor in his commentary on the *Protagoras* discusses the apparent contradiction between natural endowment and the need for the teaching of civic virtues. *Plato: Protagoras* (Oxford: Clarendon Press, 1976), pp. 79 ff. David Gallop, "Justice and Holiness in *Protagoras* 330–331," *Phronesis* 6 (1961), pp. 86–93, contends that Protagoras emerges from the argument in the early part of the dialogue completely vindicated logically. Ostwald's view, contrary to Gallop's, is cited in Chapter II.

14 Gregory Vlastos's interpretation of the Protagorean view, *Plato: Protagoras*, p. x.

15 Goethe echoed Protagoras's statement when he wrote, "We may watch Nature, measure her, reckon her, weigh her, etc., as we will. It is yet but our measure and weight, since man is the measure of things." Quoted by Gomperz, *Greek Thinkers*, p. 451. There is disagreement as to whether an objectivist or subjectivist interpretation should be attributed to the Protagorean view of the real world. For a summary of the arguments, see David K. Glidden, "Protagorean Relativism and *Physis*," *Phronesis* 20 (1975), pp. 209–27, and A. T. Cole, "The Relativism of Protagoras," *Yale Classical Studies* 22 (1972), pp. 19–45. See also G. B. Kerferd, *The Sophistic Movement*, pp. 85 ff. The subjectivist interpretation is followed in this discussion. Adam Smith also took the subjectivist position, writing that "every faculty in one man is the measure by which he judges of the like faculty in another. I judge of your sight by my sight, of your ear by my ear, of your reason by my reason, of your resentment by my resentment, of your love by my love. I neither have, nor can have, any other way of judging about them" (*Theory of Moral Sentiments*, I.i.3 [Vol. I, p. 27]).

16 His own view (*Laws* 716c) was that God, not man, is the "measure of all things." Aristotle (*Metaph.* 1062b30–35) also specifically rejected the "man-measure" doctrine, saying that "to attend equally to the opinions and the fancies of disputing parties is childish: for clearly one of them must be mistaken." Elsewhere (*N.E.* 1176a15), he maintained that the "good" man is "the measure of each thing." He quotes (1176a5) an aphorism of Heraclitus (D.-K. Frg. 9) that "asses would prefer sweepings to gold" to support his rejection of reliance on the subjective evaluations of the average citizen. However, at 1173a1 he speculates that "even in inferior creatures there is some natural good stronger than themselves which aims at their proper good." Because a discussion of sense perception follows the passage in the *Metaphysics*, quoted above, Whitney J. Oates, *Aristotle and the Problem of Value* (Princeton, N.J.: Princeton University Press, 1963), p. 187, concludes that the "normal" man who has "normal" sense perception is also Aristotle's measure of value judgments. Containing elements of both Protagorean relativism and Platonic realism, some of Aristotle's writings nevertheless served as the vehicle for the perpetuation of Protagoras's subjectivism. Sir Alexander Grant, *The Ethics of Aristotle, Illustrated with Essays and Notes*, 4th ed. (London: Longmans, Green, 1889), I, pp. 298–99, cites a passage from Aristotle's *De Anima* (430a15–20) on the subjective perception of rationality which, he asserts, "has made more sensation in the world than all the rest of the writings of Aristotle put together." After the passage was quoted by Alexander of Aphrodisias, he says, it was taken up by Averroes and his followers in the Arabian school, from whence it was passed to the Jews of Spain and ultimately "became a leaven in the Scholastic philosophies."

17 The premise that there is a knowable objective truth allows for only two alternatives: truth or error, and would strike down the man-measure doctrine as a violation of the principle of noncontradiction. Aristotle invoked this principle in his rejection of the man-measure doctrine (see note above), but he was not dealing with the problem faced by practical decision-makers who must act on perceptions before the determination of objective truth is possible. Thucydides' description (III.20) of the method used by the Plataeans to calculate the height of the siege wall surrounding their town when they planned a night assault on the barrier to break out and escape to Athens illustrates the impasse between perceptual cognition and objective truth. Thucydides records that, in order to calculate the length of the siege ladders, the courses of brick "were counted by many persons at once; and though some might miss the right calculation, most would hit upon it, particularly as they counted over and over again." In situations such as this, action must be taken on what is *perceived* to be true without ever knowing what is *objectively* true. Even where objective facts are vital to decisions,

the notion that only the "correct" estimate or appraisal should be given credence begs the question at a level that trivializes the principle of noncontradiction. Moreover, the principle of noncontradiction has no application in the comparison of value judgments.

18 This parallels the Heisenberg principle in physics which recognizes that the observational process interacts with the subject of observation. Carl Christ has noted that the mechanistic approach has declined in modern physics "in favor of a view that regards the observer and observed symmetrically, each affecting the other, and that no longer locates each event and object uniquely in time and space." See his discussion of Gregor Sebba's paper, "The Development of the Concepts of Mechanism and Model in Physical Science and Economic Thought," *American Economic Review, Papers and Proc.*, 43 (1953), p. 272. Raymond Wilder, *Evolution of Mathematical Concepts* (New York: John Wiley, 1968), p. viii, extends the concept of the Heisenberg principle to mathematics, where, he says, "the conceptual has gradually gained primacy over the observable." He criticizes some mathematicians who "seem prone to ignore or to forget the cultural nature of their work and to become imbued with the feeling that the concepts with which they deal possess a 'reality' outside the cultural milieu—in a sort of Platonic world of ideals."

19 It is difficult to make any sound generalizations about the social meaning behind the discussions of "man, the measure" and the many illustrations drawn from physical appearance in *Theaet.* 152–58. However, a possible allusion to social interaction should be noted in Socrates' reference to an "assemblage of many—to which assemblage people give the name of 'man' or 'stone' or of any living creature or kind" (*Theaet.* 157b–c). F. M. Cornford points out that the text here is corrupt and its context ambiguous. *Plato's Theory of Knowledge: The Theaetetus and the Sophist of Plato* (New York: Liberal Arts Press, 1957), p. 48, n. 1. In reference to the dialectic process implicit in this section of the *Theaetetus*, Cornford makes an interesting observation on the traditional use of sources in ancient works as an intellectual dialectic at a social or historic level: "A less familiar feature of dialectic," he writes, "is the treatment of current views, whether popular or philosophic. Aristotle regularly begins his treatises with a review of received opinions, proceeding on the avowed assumption that any belief accepted by common sense or put forward by wise men is likely to contain some measure of truth, however faultily expressed" (pp. 30–31). It should be noted how closely this outlook corresponds to the generative potential which Protagoras ascribed to the participative political process. E. E. Ryan, "Aristotle's *Rhetoric* and *Ethics* and the Ethos of Society," *Greek, Roman and Byzantine Studies* 13 (1972), pp. 291–308, discusses another aspect of Aristotle's assimilation of Protagorean ideas on the social process.

20 See G. B. Kerferd, "Plato's Account of the Relativism of Protagoras," pp. 22 ff., for a discussion of various translations of this passage.

21 Aristotle (*N.E.* 1135a1–5) accepted this relativism as applicable to "the things which are just not by nature but by human enactment," which, he observed, "are not everywhere the same." Plescia attributes "the major turning point" in the secularization of the oath in ancient Greece to the separation of *nomos* (law) from *physis* (nature) by the sophists (*Oath and Perjury in Ancient Greece*, p. 102). At a more general level, Vinogradoff (*Outlines of Historical Jurisprudence*, II) attributes to Protagoras the initiation of "a considered justification of positive law" and asserts (p. 32) that "he was in a truer sense than either Sokrates or Plato the originator of a definite theory of jurisprudence." He concludes (pp. 40–41) that Plato found reliance on the consensus of the *polis* an unacceptable source of valid law and, instead, strove for an objective ideal as a substitute. The sophist thinkers, on the other hand, turned

to natural law as "a universal principle" and used it as a basis for criticizing tyranny. Jay Newman, "The Recoil Argument," *Apeiron* 16 (1982), pp. 47–52, analyzes Socrates' attempt (*Protag.* 170e–171c) to refute Protagoras's relativism.

22 D. Loenen, *Protagoras and the Greek Community*, p. 82. On Protagoras's relativism, see Adolfo Levi, "Studies on Protagoras. The Man-Measure Principle: Its Meaning and Applications," *Philosophy* 15 (1940), pp. 147–67.

23 Vlastos believes evidence for Protagorean influence on Herodotus on this point inconclusive. See *Plato: Protagoras*, p. xvi, n. 30. Note should be taken of the context of mutual respect and consideration in which the diverse customs of the two groups are presented in the Darius story.

24 Frg. 15. *Ancilla to the Pre-Socratic Philosophers*, p. 22.

25 Quoted by Paul Vinogradoff, *Outlines of Historical Jurisprudence*, II, p. 26, who also comments (p. 27) on a fragment of Archelaos, a student of Anaxagoras, who said that "right and wrong existed not by nature but by opinion" (Frg. 1 of Diels, *Fragmente der Vorsokratiker*, I, p. 410).

26 "For Protagoras," Lloyd-Jones affirms, "the concept of justice was not a given empirical fact based on sensation, like, say, the notion of a rhinoceros, but a norm, a concept created by the human mind" (*Justice of Zeus*, p. 131). M. A. Bertman, "The Greek *Polis* and Justice," *Apeiron* 14 (1980), pp. 134–38, makes a Protagorean distinction between justice as social rules and a concept of justice as an expression of human sympathy which either naturally or divinely supports a sense of community. He recognizes Socrates' criterion of "not damaging one's own soul" as an individualistic, internal measure of justice but fails to develop the significance of this in reference to the *polis*.

27 Frg. 4. *Ancilla*, p. 38.

28 *Aspects of Antiquity: Discoveries and Controversies* (New York: Viking Press, 1968), pp. 69–70. Finley's attitude toward Protagoras is more characteristic of the older view of the sophists that prevailed before their so-called "rehabilitation" which has occurred in recent decades. In 1872, however, Cambridge economist Henry Sidgwick wrote a spirited defense of the sophists in response to the controversy which arose over Grote's sympathetic treatment of them in the famous chap. 67 of his *History of Greece*. See Sidgwick's "The Sophists," *Journal of Philology* 4 (1872), pp. 288–307; and 5 (1873), pp. 66–80. A useful bibliography on the recent reassessment of the sophists, as well as a discussion of Protagoras's influence on Renaissance thought, is contained in Charles Trinkaus's "Protagoras in the Renaissance: An Exploration," in *Philosophy and Humanism: Renaissance Essays in Honor of Paul Oskar Kristeller*, ed. Edward P. Mahoney (Leiden: E. J. Brill, 1976), pp. 190–213. Guthrie's *History of Greek Philosophy*, III, pp. 10–13, has a more general survey of the controversy, especially for the earlier period, and, in all, he devotes more than three hundred pages to the sophists. See, with special reference to the Victorian period, chap. 6, "Socrates and the Sophists," pp. 264–321, of Frank M. Turner's *Greek Heritage in Victorian Britain*. Winton and Garnsey, "Political Theory," p. 41, assert that Protagoras offered "a rationale both of democracy and of sophistic education" in the democratic process. On the sophists generally, see also Sir Alexander Grant, *The Ethics of Aristotle*, I, pp. 105–55; Eric A. Havelock, *Liberal Temper in Greek Politics*; Rosamond K. Sprague, *The Older Sophists*; G. B. Kerferd, *The Sophistic Movement*; and Mario Untersteiner, *The Sophists*, trans. Kathleen Freeman (Oxford: Basil Blackwell, 1954).

29 *Outlines of Historical Jurisprudence*, II, p. 34. Protagoras's utilitarian ideas were perpetuated

in the atomist school of thought. David J. Furley has noted that Epicurus, for example, also based his concept of justice upon its utility to society. See *Two Studies in the Greek Atomists* (Princeton, N.J.: Princeton University Press, 1967), p. 203. For the affinities between Protagoras's and Democritus's views on the social character of justice, see Lloyd-Jones, *Justice of Zeus*, p. 132. A. T. Cole carries the utilitarian analysis into an interpretation of the sophist's role in the *polis* as a propagandist changing the opinions (but not the perceptions) of individuals. See "The Apology of Protagoras," *Yale Classical Studies*, 19 (1966), pp. 103–18.

30 For example, *Rep.* VI.488.

31 *Aspects of Antiquity*, p. 88. The proper role of the expert in the determination of values is still a topic of philosophical debate in essentially the same terms as those employed by Plato. Alasdair MacIntyre, for example (*After Virtue*, p. 101), asserts that the concept of managerial effectiveness is a "contemporary moral fiction" and "the notion of social control embodied in the notion of expertise . . . a masquerade."

32 The importance of the process of participative discourse in the Athenian democracy led to an emphasis on training in rhetoric for its own sake. George Kennedy, *The Art of Persuasion in Greece* (Princeton, N.J.: Princeton University Press, 1963), p. 16, points out that "the concern of the rhetorician is with process, with technique, with artistic excellence rather than with philosophical truth, political principle, or moral rectitude."

33 "*Isonomia*," *American Journal of Philology* 74 (1953), pp. 356–57.

34 On the subjectivism and relativism of Protagoras's views, see M. F. Burnyeat's "Protagoras and Self-Refutation in Later Greek Philosophy" and "Protagoras and Self-Refutation in Plato's *Theaetetus*," which appeared in succeeding numbers (January and April) of *Philosophical Review* 85 (1976), pp. 44–69; 172–95. The *Dissoi Logoi*, an anonymous work written in Doric, probably after the Peloponnesian War, illustrates the tradition of formal debate or "twofold argument" as the approach to valid conclusions. See Rosamond K. Sprague's translation in *The Older Sophists*, pp. 279–93, and, for a bibliographical discussion of the treatise, Michael J. O'Brien, *The Socratic Paradoxes and the Greek Mind*, p. 75, n. 47. Protagoras is thought to have written a book entitled *Antilogiae* or *Contrary Arguments*.

35 *Protagoras and the Greek Community*, p. 18.

36 In this sense, he did not follow the Robinson Crusoe orientation which has had a dominant influence on the development of economic thought. Commenting on this perspective, Francis H. Bartlett wrote, "The noble savage of Rousseau, the 'economic man' of the classical economists, the 'economic subject' of Boehm-Bawerk, the 'farmer isolated from all the world,' or the 'inhabitant of the forest primaeval' who forms the starting point of other marginal utilitarian economists; each of these and one other [the Freudian "id"] is an isolated man. It is from the characteristics of some such individual that we are to deduce the nature of society. Social institutions are to be accounted for by reference to the desires and impulses of 'natural man.'" Quoted by A. D. Winspear, *Genesis of Plato's Thought*, p. 200, from Francis H. Bartlett's *Sigmund Freud: A Marxian Essay* (London: V. Gollancz, 1938).

37 "The Place of Protagoras in Athenian Public Life," p. 16. Thucydides asserted (II.65) that Athens was a democracy in form only under Pericles, a "government by the first citizen." Because of Pericles' success in persuading the people to follow his advice, Thucydides observed, he was able to "lead [the people] instead of being led by them." Finley (*Ancient History*, pp. 97–98) contends that the led democracy in the Greek *polis* rested on issues of political substance rather than functioning primarily in terms of pure charisma, as suggested by Weber's elitist theory of democracy. The influence of this Weberian theory on Pareto and

Schumpeter, among others, has been noted and has contributed to contemporary emphasis on entrepreneurship. The question of a democracy led by an effective leader vs. one led by popular initiative is a political issue which parallels the modern economic issue of whether manipulative advertising or "consumer sovereignty" determines demand.

38 *Philosophy and Political Economy*, p. 41. Bonar has reference to Aristotle's *Politics* (1282a15–17), a passage also discussed by Ryan ("Aristotle's *Rhetoric* and *Ethics* and the Ethos of Society"), who maintains (p. 307) that "Aristotle by implication assumes that the dialectic of debate is the final foundation of the principle of popular government." Protagoras's and Aristotle's views are in opposition to that of the Pythagoreans, whose influence may be seen in Plato's thought. Iamblichus wrote that the Pythagoreans maintained that "it is foolish to pay attention to every opinion of every one and *especially to that of the many*; for to form correct opinions and to understand belongs to the few only. For it is clear that this means 'those who know,' and they are few in number. Thus it is clear that such a power would not extend to the many." Quoted by Winspear, *Genesis of Plato's Thought*, p. 98.

39 "The Place of Protagoras in Athenian Public Life," p. 11. In his *Types of Economic Theory* (1949; reprint, New York: Augustus M. Kelley, 1967), I, pp. 36–37, Wesley C. Mitchell goes beyond this Protagorean concept by reminding us that "minds are social products." The linguist Benjamin L. Whorf commented on language as a social product. "We cut nature up," he wrote, "organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way—an agreement that holds throughout our speech community and is codified in the patterns of our language." He adds that "the agreement is, of course, an implicit and unstated one, but *its terms are absolutely obligatory*; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees." See *Language, Thought, and Reality: Selected Writings of Benjamin L. Whorf*, ed. John B. Carroll (Cambridge, Mass.: Technology Press of MIT, 1956), pp. 212–14.

40 "The Apology of Protagoras," p. 110.

41 "Political Theory," p. 41.

42 *Plato: The Man and His Work* (1926; reprint, London: Methuen, 1949), p. 246. Kerferd, "Plato's Account of the Relativism of Protagoras," p. 25, makes the point that "Protagoras does not profess to teach men what is just, but to teach them *Euboulia*, Good Counsel,—in domestic affairs, how *best* to order them, and in the affairs of the city how to be most able in speaking and acting." William F. Campbell, "The Free Market for Goods and the Free Market for Ideas in the Platonic Dialogues," *History of Political Economy* 17 (1985), pp. 187–97, stresses the distinction between the use of economic theory to achieve given ends efficiently as opposed to the selection of the ends themselves.

43 My view is supported by Aristotle's assertion (*Rhet.* 1362a17–20), quoted below, that the political orator is concerned with means, not ends. Aristotle also asserted (*N.E.* 1103b2) that all legislators aim to "make the citizens good by forming habits in them" and that "those who do not effect it miss their mark." Earlier (1103a24), he had remarked that "we are adapted by nature to receive [virtue], and are made perfect by habit."

44 In the debate in Aristophanes' *Frogs* about who is most qualified to be brought back to earth to guide the Athenians, Aeschylus, in a possible allusion to Plato's favorite ship of state analogy, replies to Euripides' claim: "Your lessons have . . . taught our sailors to challenge, discuss, and refute / The orders they get from their captains and yet, when I was alive, I protest that the knaves / Knew nothing at all, save for rations to call, and to sing 'Rhyppapae' as they

pulled through the waves. / . . . But now they harangue, and dispute, and won't row / And idly and aimlessly float to and fro" (1070–80). Guthrie, *History of Greek Philosophy*, III, p. 458, discusses Socrates' acceptance of the teachability of virtue.

45 Possibly a reference to the anecdote recounted by Herodotus (V.92) about Thrasybulus, tyrant of Miletus, who, in response to an inquiry by Periander of Corinth as to how stability is best maintained in a tyranny, struck off the taller grain heads in a field. Aristotle (*Pol.* 1284a) repeats the story, but reverses the roles of the participants in his account.

46 Thuc. II.37. Francis R. Bliss discusses the evidence that "there was in the fifth century a theory that Athens' spiritual and political growth sprang from her open system, her free market for products and ideas." See his ΗΔΥ ΕΝ ΣΙΚΕΛΙΑΙ—Democracy and Pleasure," in *Laudatores Temporis Acti: Studies in Memory of Wallace Everett Caldwell*, ed. Mary F. Gyles and Eugene W. Davis (Chapel Hill: University of North Carolina Press, 1964), pp. 3–14.

47 *Outlines of Historical Jurisprudence*, II, pp. 78–79.

48 *Plato and the Other Companions of Sokrates*, II, p. 84.

49 See J. J. Spengler, *Origins of Economic Thought and Justice*, pp. 1–10, for a discussion of the continuation into Roman law and Hobbesian thought of the premise of the dominance of the public interest in determining individual shares and status.

50 "Due process" involves the assumption that if certain legal procedures are followed, the outcome will be just. According to this doctrine, justice is a function of a properly conducted legal process itself. In the absence of such an assumption, another standard would have to be introduced by which the justice of any proceeding could be appraised. But if such a superior standard exists, why not use it to begin with? The crux of the problem is that legal decisions must be based either upon an *individual's* prerogative to make the decision or on a *social process* accepted as fair *in itself*. If the latter method is used, the outcome must be judged by the fairness of the *process*. This is not to say that an individual may not properly criticize irregularities in constituted procedures. Futhermore, there may be a moral right to condemn even bona fide legal decisions thought to be unjust. Both have a place in the evolution of social consensus, but they cannot be substituted, in the name of antilegalism, for formal, participative decision-making processes without begging the question by requiring still *another* process for selecting the particular individual whose sense of justice is to be honored above all others.

51 See, for a comparison of Protagoras's views on punishment with those developed in Plato's *Laws*, Trevor J. Saunders, "Protagoras and Plato on Punishment," in *The Sophists and Their Legacy*, pp. 129–41.

52 B. Jowett's translation, revised by Martin Ostwald and edited by Gregory Vlastos, *Plato's "Protagoras."* The W. K. C. Guthrie translation in the Hamilton and Cairns edition of the dialogues uses the term "correction" instead of "calls men to account," consistent with the earlier illustration in the dialogue of the writing master drawing lines to guide the pupil. This in itself is an illustration of the concept of justice as a system of guidelines facilitating the training of citizens in ordering their cursive efforts. On the writing analogy, see E. G. Turner, "Athenians Learn to Write: Plato, *Protagoras* 326d," *Bulletin of the Institute of Classical Studies of the University of London* 12 (1965), pp. 67–69.

53 The emphasis on popular participation was consistent with the Athenian tradition. A. Momigliano, "The Greeks and Us" [review of three works of M. I. Finley], *New York Review of Books* 22 (Oct. 16, 1975), p. 36, notes that "the great Greek innovation of a self-governing community, by the mere fact of including both the rich and the poor institutionalized strife

(*stasis*)." Solon is reported to have passed a law that, in time of civic strife, if a citizen did not support one of the opposing sides, he would lose his rights of citizenship (Plutarch, *Lives* I, Solon, xx.1; Aristotle, *Constitution of Athens* 8.5). This is cited by Hartvig Frisch (*Might and Right in Antiquity*, pp. 162–63) as an example of Solon's "confidence in the wholesome moderation of the people in the mass." Another law of Solon's day, mentioned by Plutarch (*Solon* xviii.5) and discussed by Vinogradoff, allowed any citizen to come forward and indict the offender of another incapable of adequately pleading his own case or to bring accusations in his behalf—a democratic effort, apparently, to make the weaker side stronger (*Outlines of Historical Jurisprudence*, II, p. 116). There are suggestions in Aristophanes' comedies, however, that this law may have been abused, giving rise to an entourage of informers and troublemakers who incited lawsuits in search of personal advantage. See also J. Walter Jones, *Law and Legal Theory of the Greeks*, p. 79. Our own courts allow only those with "standing" or a personal interest in the outcome of a controversy to participate in legal actions. For an analysis of Solon's political and economic perspectives on the stability of the *polis*, see Vlastos, "Solonian Justice," pp. 65–83.

54 This sense of community solidarity was disintegrating in the fifth and fourth centuries B.C. under pressures from commercial intercourse and cosmopolitanism.

55 *Origins of Greek Thought*, pp. 78–79.

56 See *Laws* 694b, where Cyrus's perfection as a monarch is explained by Plato in terms of his capacity to adduce advice from all strata of society. Plato, however, took it for granted that the authoritarian leader would *require* obedience. While Protagoras envisioned the wise leader giving advice to the citizens so that *they* could make decisions with the aid of such advice, Plato saw the merit of the leader's receiving advice from the citizens so that *he* could make decisions. Morrison, "The Place of Protagoras in Athenian Public Life," suggests (p. 15) that Euripides' *Suppliant Women* is a defense of the Protagorean idea of a democracy guided by a noble leader and that it was intended to aid Alcibiades' rise to power under Protagoras's tutelage after 421 B.C. He further suggests (p. 13) that Herodotus got the material for Darius's speech (III.83) in the debate about the merits of democracy, oligarchy, and monarchy from Protagoras and that Protagoras's status was "due to his ability to provide a theoretical backing to the practice of the Periclean democracy."

57 See, for an interpretation of Plato's and Protagoras's views at odds with the consensus in the literature and with the line of analysis developed here, Edward N. Lee, "'Hoist with His Own Petard': Ironic and Comic Elements in Plato's Critique of Protagoras (*Theaet.* 161–171)," in *Exegesis and Argument: Studies in Greek Philosophy Presented to Gregory Vlastos* (New York: Humanities Press, 1973), pp. 225–61.

58 J.-P. Vernant (*Origins of Greek Thought*, pp. 94–95), following É. Will, maintains that the public coinage of money, beginning in the mid-sixth century B.C., was an expression of a public or social measure of wealth. See Will's "De l'aspect éthique de l'origine grecque de la monnaie," pp. 209 ff., and "Réflexions et hypothesès sur les origines du monnayage," *Revue numismatique* 17 (1955), pp. 5–23.

59 But see *Laws* 875a–c, where Plato retreats from this position and seems to recognize the basic inconsistency between the gratification of individual self-interest and the protection of the public good. He admits that there is "no man whose natural endowments will ensure that he shall both discern what is good for mankind as a community and be both able and willing to put the good into practice when he has perceived it." The real spirit of Athenian democracy was articulated by Pericles in his funeral oration (Thuc. II.40.2). "Our citizens," he said, "attend both to public and private duties, and do not allow absorption in their own

various affairs to interfere with their knowledge of the city's. We differ from other states in regarding the man who holds aloof from public life not as 'quiet' but as useless." Buxton, *Persuasion in Greek Tragedy*, considers the value which classical Greek civilization placed on public argument, debate, and disputation "one of [its] distinguishing features" (p. 5), observing that "faith in public argument lay at the root of the Athenian democracy" (p. 16). He notes, however (p. 57), that public debate had no place in Plato's ideal state.

60 The position attributed by Plato to Socrates in the *Crito* is somewhat contradictory to that in the *Apology*. In the former, Socrates acknowledges his personal obligation to obey the laws of his city, commenting that, "if any one of you stands his ground when he can see how we administer justice and the rest of our public organizations, we hold that by so doing, he has in fact undertaken to do anything we tell him" (51e). See on this issue Gregory Vlastos, "Socrates on Political Obedience," *Yale Review* 63 (1973–74), pp. 517–34; and J. Dybikowski, "Was Socrates as Reasonable as Professor Vlastos?" *Yale Review* 64 (1974–75), pp. 293–96. While the statement in the *Crito* is essentially a social compact formulation, it suggests more a compact between the citizen and his sovereign, in line with the tradition of duty to authority in the Plato of the *Laws* and *Statesman*, than the social compact between equal citizens, discussed in the *Republic*. Charles H. Kahn, "The Origins of Social Contract Theory," p. 95, comments that "such a doctrine of implicit compact, made not by the citizens to one another but by an individual citizen to the state, has no parallel in antiquity as far as I know."

61 "*Isonomia*," p. 359. Later, however, as noted in Chapter IV, Vlastos argued against the notion of Plato as a "moral authoritarian."

62 *Plato's Theory of Knowledge*, p. 70. Cornford points out that "Socrates will not attempt to disprove the proposition . . . that each man has his private sensations and perceptions, which are infallible." The problem lies in extending the doctrine to judgments: "If each man is the measure of his own judgments or beliefs, how can one be wiser than another?" A. T. Cole develops the idea that Protagoras's position was utilitarian at the level of changing men's *evaluations* of their perceptions ("The Apology of Protagoras," p. 110). For a discussion relating utilitarianism to the issue of whether "justice pays," see John Grote and Henry Sidgwick, "Plato's Utilitarianism," *Classical Review* 3 (1889), pp. 97–102.

63 Plato's treatment of the law court is nearly as severe as Anne Strick's vitriolic attack on the adversary system, *Injustice for All: How Our Adversary System of Law Victimizes Us and Subverts Justice* (New York: Putnam's, 1977).

64 It is generally accepted from the evidence of the dialogues that Alcibiades was Socrates' disciple during the former's early manhood.

65 The contemporary relevance of the impasse presented in the Alcibiades/Pericles exchange is illustrated by a comment of Harold C. Petrowitz, professor of law at American University, on the requirement of unanimous jury decisions (Letter to the Editor, *Washington Post*, February 10, 1979): "The theory behind the use of the jury," he writes, "is that *collectively* its membership represents the judgment of a reasonable person and reflects the values of the community. This collegial approach accommodates the reality that one person acting as decision-maker may not be reasonable and unbiased. The rule of unanimity for jury verdicts is in direct conflict with this theory. It allows the decision of the jury to be controlled by one person and subjects its verdict, be it innocent or guilty, to the tyranny of the *unreasonable* man."

66 *Paideia: The Ideals of Greek Culture*, trans. from the 2nd German ed. by Gilbert Highet (New York: Oxford University Press, 1939), I, p. 294.

67 C. J. Classen ("Aristotle's Picture of the Sophists," in *The Sophists and Their Legacy*, pp. 7–24) argues that Aristotle treated sophistic thought as a source of ideas to be examined and criticized, not to be rejected out of hand.
68 In *De Sophisticis Elenchis* (170a10–15), Aristotle, reflecting Protagorean ideas, insists that argument must be directed against the specific subjective perceptions of a given opponent.
69 He mentions (1173a15) a similar incremental approach to pleasure, saying that some regard it as "indeterminate, because it admits of degrees," and he then extends the notion to justice and the other virtues, which, he asserts, can only be approximated "more or less." This may be a reference to a dyad, a mathematical form discussed in Chapter VII.
70 Elsewhere (*N.E.* 1172b20), he states, "For every good is more worthy of choice along with another good than taken alone."
71 The idea of conspicuous consumption was also recognized by Adam Smith. In the *Wealth of Nations* (I.xi [Cannan ed. p. 172]), he observed that "with the greater part of rich people, the chief enjoyment of riches consists in the parade of riches, which in their eye is never so complete as when they appear to possess those decisive marks of opulence which nobody can possess but themselves."
72 "Genesis of the Marginal Utility Theory," *Economic Journal* 63 (1953), p. 639. See also Kauder's *A History of Marginal Utility Theory* (Princeton, N.J.: Princeton University Press, 1965). Kauder summarizes the work of Oskar Kraus, a marginalist economist and classical scholar, who drew attention to the close parallels between Aristotle's expositions of marginalist comparisons in the *Topics* and those of Menger and Böhm-Bawerk. J. J. Spengler, "Aristotle on Economic Imputation and Related Matters," *Southern Economic Journal* 21 (1955), pp. 371–89, expands on this analysis.
73 In his translation Frank J. Nisetich renders the passage in Pindar as follows:
Water is preeminent and gold, like a fire
  burning in the night, outshines
all possessions that magnify men's pride.
74 In the *Ethics* (1179a33–b20), however, he expresses the Platonic view that only a "few" can be convinced by argument, not "the many."

VII *Aristotle and Two-Party Exchange*

1 "The Scope and Method of Political Economy in the Light of the 'Marginal' Theory of Value and Distribution," *Economic Journal* 24 (1914), p. 5. For an elaboration of this perspective in terms of modern welfare theory, see Stephen T. Worland, "Aristotle and the Neoclassical Tradition: The Shifting Ground of Complementarity," *History of Political Economy* 16 (1984), pp. 107–34. Kenneth N. Townsend, "Platonic Economic Theory: The Economics of Moderation" (Ph.D. diss., Louisiana State University, 1983), contends that the concepts of sufficiency and moderation developed by Plato and perpetuated by Aristotle are relevant to modern theories of welfare.
2 See F. E. Peters, *Aristotle and the Arabs: The Aristotelian Tradition in Islam* (New York: New York University Press; London: University of London Press, 1968).
3 Odd Langholm, *Price and Value in the Aristotelian Tradition: A Study in Scholastic Sources* (Bergen, Olso, Tromsø: Universitetsforlaget, 1979), p. 5.
4 Ibid. p. 11.
5 John Gillies, *Aristotle's Ethics and Politics*, 3rd ed. (London: Printed for T. Cadell and W. Davies, 1813), I, pp. 2–3, cites an authority for the existence of twelve thousand com-

mentators on various works of Aristotle at the close of the sixteenth century. Gillies notes (p. 217) that in its changing cyles of vogue, Aristotle's writings were sometimes "censured as pestilent sources of heresy, and condemned to the flames" while at other times "the same writings were held in such veneration that whoever denied their orthodoxy was persecuted as an infidel." He refers to "eight different revolutions of its authority in the University of Paris." See also Paul Oskar Kristeller, "Renaissance Aristotelianism," *Greek, Roman and Byzantine Studies* 6 (1965), pp. 157–74; and Charles B. Schmitt, *Aristotle and the Renaissance* (Cambridge, Mass.: Harvard University Press, 1983).

6 *Capital*, I, pp. 30–31. Scott Meikle, "Aristotle and the Political Economy of the Polis," *Journal of Hellenic Studies* 99 (1979), p. 59, contends that Aristotle tried in various ways to explain commensurability, but "in the end gives up the task as impossible." Cornelius Castoriadis, "From Marx to Aristotle, from Aristotle to Us," trans. Andrew Arato, *Social Research* 45 (1978), pp. 667–738, elaborates Marx's views. Castoriadis agrees (pp. 688 ff.) that Aristotle recognized that the making of incommensurables commensurable is the necessary basis of exchange theory. See also M. Yassine Essid, "Marx et trois écrivains grecs du IVème siècle: Aristote, Platon et Xenophon" (Thesis, Université de Paris VIII, 1976–77); P.-D. Dognin, "Aristote, Saint Thomas et Karl Marx," *Revue des sciences philosophiques et théologiques* 42 (1958), pp. 726–35; and V. N. Andrejev, "Karl Marx on the Aims of Production in Antiquity and the Ancient Evidence for the Athenian Economy of the Fifth and Fourth Centuries B.C.," *Vestnik Drevnej Istorii* 166 (1983), pp. 3–31 [English summary]. E. Sommerfeld traces economic analysis from Aristotle through Copernicus to Marx. He emphasizes Aristotle's inability to explain an objective measure of value but credits him with understanding the importance of money as the measure of social interaction. See his "Ökonomische Analyse bei Aristoteles," in *Aristoteles als Wissenschaftstheoretiker*, ed. J. von Irmscher and Reimar Mueller, *Schriften zur geschichte und Kultur der Antike* 22 (Berlin: Akademie-Verlag, 1983), pp. 250–54.

7 *History of Economic Analysis*, p. 61. Barry Gordon generally followed Schumpeter's labor theory of value interpretation of this passage in his "Aristotle and the Development of Value Theory," *Quarterly Journal of Economics* 78 (1964), pp. 115–28. However, he later apparently abandoned this view, for it is not mentioned in his *Economic Analysis Before Adam Smith*. Van Johnson, "Aristotle's Theory of Value," *American Journal of Philology* 60 (1939), pp. 445–51, rejects the labor theory of value interpretation. Harold D. Hantz, "Justice and Equality in Aristotle's *Nicomachean Ethics* and *Politics*," *Diotima* 3 (1975), pp. 83–94, contends that Aristotle's analysis of justice was based on various concepts of equality.

8 *History of Economic Analysis*, p. 57.

9 "Aristotle and Economic Analysis," p. 15. Finley's rejection of any analytic content in the *Ethics* is based partly on his narrow interpretation of its mathematical content and partly on the fact that, as mentioned in Chapter III, he relies on a modern market definition of economics, which he takes from Eric Roll. See Finley's *Ancient Economy*, p. 22. His mathematical interpretation follows F. D. Harvey, "Two Kinds of Equality," *Classica et Mediaevalia* 26 (1965), pp. 101–46, who found only arithmetic and geometric proportionality represented in the *Ethics*. Although Harvey did take note of the harmonic proportion in his general remarks, he failed to recognize the subtleties implicit in it and did not correlate it with the reciprocal proportion alluded to in Book V of the *Ethics*. Taking Finley to task for accepting Schumpeter's perspective on economic analysis, Scott Meikle, "Aristotle and the Political Economy of the Polis," p. 57, comments that "the only conclusion . . . it would be proper to draw from such an exercise is that Aristotle was not an orthodox economist of the

twentieth century." "It is ironical," he adds, "that Finley, such an unremitting opponent of anachronistic attempts to comprehend Antiquity in terms of the categories of modern capitalist economy, should himself fall victim to anachronism." In his review of *The Ancient Economy*, M. W. Frederiksen asserted that Finley's "suspicions about modernist dogma take on a faintly nihilist tone." "Finley," he writes, "is an umpire who knows how the game must end. He likes to tell us what the ancient world is not, and his vigorous denials may sometimes mislead." See Frederiksen's "Theory, Evidence and the Ancient Economy," *Journal of Roman Studies* 65 (1975), p. 170.

10 Theodore J. Tracy, *Physiological Theory and the Doctrine of the Mean in Plato and Aristotle* (Chicago: Loyola University Press, 1969), p. 344. Tracy's Appendix I, pp. 344–46, summarizes the evolution of ancient Greek mathematical definitions of the mean and of the harmonic proportion. The harmonic proportion or mean may be briefly described as one which fixes the mean between two extremes in a proportion by adding a fraction of the smaller extreme to itself and subtracting the same fraction of the larger extreme from itself. For example, 8 is the harmonic mean of 6 and 12 since it is one-third of 6 greater than 6 and one-third of 12 smaller than 12. The harmonic proportion is thus a technique for framing the difference between extremes and a mean from the subjective point of view of each extreme.

11 "Aristotle's Subdivisions of 'Particular Justice,'" *Classical Review* 8 (1894), pp. 185–92. Henry Jackson's commentary, *The Fifth Book of the Nicomachean Ethics of Aristotle* (London: Cambridge University Press, 1879), recognized a theory of mutual advantage in exchange in the *Ethics*, but he followed Bekker's limited concept of barter and did not treat the harmonic proportion or the zone of surplus created by parties coming together to exchange. W. F. R. Hardie, *Aristotle's Ethical Theory* (Oxford: Clarendon Press, 1968), pp. 195–202, summarizes much of the modern literature, but relies solely on the inverse geometric proportion in interpreting the mathematical premises of the passage on exchange. W. D. Ross, *The Works of Aristotle Translated into English* (Oxford: Clarendon Press, 1925), ventured an explanation of the passage in his translation of the *Ethics*, but expressed doubt about its meaning, saying that Aristotle did not explain very clearly what he meant by "proportionate reciprocity" (IX, Book V [1133a5], n. 1). H. H. Joachim acknowledged that he had no confidence in his own interpretation and, after attempting an analysis of the passage, admitted that what Aristotle meant was "unintelligible" to him. See Joachim's commentary, edited by D. A. Rees, *Aristotle: The Nicomachean Ethics* (Oxford: Clarendon Press, 1951), pp. 141–53. A. R. W. Harrison's negative view of Joachim's commentary and of the juridical content of Book V of the *N.E.* might have been altered by an understanding of the harmonic proportion as well as the mutual benefit to be gained from exchange. See his "Aristotle's *Nicomachean Ethics*, Book V, and the Law of Athens," *Journal of Hellenic Studies* 77 (1957), pp. 42–47. In their commentary R. A. Gauthier and J. Y. Jolif, *L'Éthique à Nicomaque*, 2nd ed. (Louvain: Publications Universitaires, 1970), II, Part I, pp. 375–88, interpret the passage to indicate a concept of personal equality. They find an emphasis upon community and stability in Book V of the *Ethics*, but do not attempt to carry this pattern into an analysis of two-party transactions in isolated exchange. F. H. Eterovich, *Aristotle's Nicomachean Ethics: Commentary and Analysis* (Washington, D.C.: University Press of America, 1980), breaks no new ground but has an excellent bibliography which, however, ignores the economics literature on the subject. For a discussion of how modern anthropologists and legal theorists have dealt with the mutual benefits of exchange, see Ian R. Macneil, "Exchange Revisited: Individual Utility and Social Solidarity," *Ethics* 96 (1986), pp. 657–93.

12 According to S. C. Humphreys (*Anthropology and the Greeks*, p. 17), anthropologists and

classicists "collaborated or at least regarded each other's work with sympathetic interest from about the middle of the nineteenth century up to the First World War, recoiled in mutual suspicion during the inter-war period, and have been slowly returning to a sympathetic attitude since the Second World War." For citations to some of the literature, see Lowry, "Recent Literature on Ancient Greek Economic Thought," pp. 78–79; S. C. Humphreys, "History, Economics and Anthropology: The Work of Karl Polanyi," *History & Theory* 8 (1969), pp. 165–212, reprinted in *Anthropology and the Greeks*, pp. 31–75; M. I. Finley, "Anthropology and the Classics," in *The Use and Abuse of History* (New York: Viking Press, 1975), pp. 102–19; and Roberto Marchionatti, *Gli economisti e i selvaggi: Una critica antropologica della scienza economica* (Turin: Loescher Editore, 1985). A. French, "Approaches to the Study of Greek Society," in *Hellenika: Essays on Greek History and Politics*, ed. G. H. R. Horsley (North Ryde, N.S.W.: Macquarie Ancient History Assoc., 1982), pp. 1–8, discusses the current influence of economic history, sociology, and anthropology on research and teaching in the classics.

13 On this controversy, see S. C. Humphreys, *Anthropology and the Greeks*, pp. 137–41; M. I. Finley, ed., *The Bücher-Meyer Controversy* [in German] (New York: Arno Press, 1979); and Paul Cartledge, "'Trade and Politics' Revisited: Archaic Greece," in *Trade in the Ancient Economy*, ed. Peter Garnsey, Keith Hopkins, and C. R. Whittaker (Berkeley and Los Angeles: University of California Press, 1983), pp. 1–15.

14 See Polanyi's "Aristotle Discovers the Economy," in *Trade and Market in the Early Empires: Economies in History and Theory*, ed. Karl Polanyi, Conrad M. Arensberg, and Harry W. Pearson (New York: Free Press, 1957), pp. 64–94. Meikle, "Aristotle and the Political Economy of the Polis," pp. 57, 71 ff., takes issue with the Weberian framework, which, he thinks, unduly influenced the work of both Polanyi and Finley. In chap. 6 (pp. 88–108) of his *Ancient History*, Finley distances himself from Weber's notion of ideal types. He does not, however, clearly develop an analytical model of his own.

15 "Carl Menger's Two Meanings of 'Economic,'" in *Studies in Economic Anthropology*, ed. George Dalton (Washington, D.C.: American Anthropological Assn., 1971), pp. 16–24.

16 See Vinogradoff's "Aristotle on Legal Redress," *Columbia Law Review* 8 (1908), pp. 548–60. Max Hamburger's analysis of the Aristotelian material on justice in exchange, *Morals and Law: The Growth of Aristotle's Legal Theory* (New Haven, Conn.: Yale University Press, 1951), pp. 48–53, has a definite nineteenth-century market flavor. Hamburger mentions (p. 50) that the Roman jurist Paulus drew on Aristotle's theory of justice in exchange for his discussion of the law of sale found in Book XVIII (D.18.1.1) of Justinian's *Digest*. Hans Kelsen's treatment goes little beyond a recognition of voluntarism as a universal in exchange transactions. See his "Aristotle's Doctrine of Justice," in *Aristotle's Ethics: Issues and Interpretations*, ed. James J. Walsh and Henry L. Shapiro (Belmont, Calif.: Wadsworth, 1967), pp. 102–18, reprinted in *What Is Justice?* (Berkeley and Los Angeles: University of California Press, 1960), pp. 117–36. The Italian historian Glauco Tozzi develops the concept of mutual subjective utility as the basis of exchange, free from the concern with status and the labor theory of value advanced by some economic anthropologists and economists. See his *Economisti greci e romani* (Milan: Feltrinelli, 1961).

17 Aristotle (*Pol.* 1268b) criticized Hippodamus's recommendation that the larger juries not be limited to such a narrow choice. Hippodamus had advocated that jurors be allowed to write individual opinions as to the appropriate amount of the award to be made to a winning litigant. These opinions would then be averaged for a final decision. The two modern arbitration processes analyzed by Ashenfelter and Bloom, the "final-offer" procedure and the con-

ventional approach, correspond to the two systems about which the ancients debated. See Orley Ashenfelter and David E. Bloom, "Models of Arbitrator Behavior: Theory and Evidence," *American Economic Review* 74 (1984), pp. 111–24.

18 Grant, *Ethics of Aristotle*, I, p. xvii. See the preface of Grant's commentary for a discussion of the literature on the authenticity and condition of Aristotle's ethical writings. For an excellent summary of Aristotelianism in the West, see John L. Stocks, *Aristotelianism* (London: George G. Harrap, 1925). His description of the route by which Aristotle's writings came to the West is instructive. He writes (pp. 125–26): "By this devious path, from Athens to Constantinople, from Constantinople to Bagdad, from Syria to Africa, from Africa to Spain, came Aristotle to complete his empire in the West. And in what strange guise he came! The West knew no Greek and was far enough out in the interpretation of what it had received through the Latin. But Averroes was an Arab born in Spain who knew neither the Greek in which the philosopher wrote, nor the Syriac into which he had been first translated, who wrote, further, his own commentaries in Arabic which the nations of the West could not understand." Stocks quotes Renan's description of the printed editions of Averroes's works on Aristotle as "a Latin version of a Hebrew version of a commentary written on an Arabic version of a Syriac version of a Greek text."

19 *Notes on the Nicomachean Ethics of Aristotle* (1892; reprint, New York: Arno Press, 1973), I, p. 462.

20 The concept of contract as the deliberative structuring of relationships for mutual benefit is crystallized in the modern law of partnership, and Aristotle's premise that the pool of benefits generated by a contract should be divided equally, either through bargaining, arbitration, or judicial decree, is reflected in the modern rule that profits from partnership, like the proceeds of the hunt, will be divided equally among the partners, regardless of the original contributions to the enterprise, unless otherwise specifically agreed. This also holds true in the dissolution of partnerships, where contributions are returned pro rata, but the surplus is divided equally.

21 Renford Bambrough, "Aristotle on Justice: A Paradigm of Philosophy," in *New Essays on Plato and Aristotle*, ed. Renford Bambrough (London: Routledge & Kegan Paul; New York: Humanities Press, 1965), pp. 156–62, characterizes justice as "virtue" in two-party relationships and recognizes particular justice as a dynamic concept, but he does not explore the implications of these perspectives.

22 Adam Smith railed against some of these laws which still persisted in his day, comparing the "popular fear of engrossing and forestalling" to the "popular terrors and suspicions of witchcraft" (*Wealth of Nations*, IV.v [Cannan ed., p. 500]).

23 Karl Menninger, *Number Words and Number Symbols: A Cultural History of Numbers*, trans. by Paul Broneer from the revised (1958) German edition (Cambridge, Mass., and London: MIT Press, 1969), pp. 212–13.

24 Letter to author, March 1, 1984.

25 André Guibaut, *Tibetan Venture*, trans. Lord Sudley (London: John Murray, 1949), p. 99.

26 Samuel, *From Athens to Alexandria*, pp. 35–36, discusses proposals for distributing the surplus from the silver mines at Maroneia, contending that none aimed at stimulating economic growth, as one might expect in a modern state.

27 "Karl Marx and the History of Classical Antiquity," *Arethusa* 8 (1975), pp. 24–25.

28 This approach, supported by Euclid's *Elements*, was a major influence in mathematical thought into the nineteenth century. John Pullen, "Malthus on the Doctrine of Proportions and the Concept of the Optimum," *Australian Economic Papers* 21 (1982), pp. 270–85,

discusses the doctrine of proportions as Malthus's "favourite doctrine" and his characterization as "a lover of the golden mean," although he does not mention the ancient Greek origin of the doctrine of proportions. Malthus's use of the arithmetic and geometric progressions in his population theory is well known. Pullen points out (p. 271) that "although Malthus did not use the term 'optimum,' his doctrine of proportions is essentially the same as the concept of the optimum, and Malthus must therefore be recognized as having been an early contributor to the introduction and development of the concept of the optimum in economics." Pribram, *History of Economic Reasoning*, p. 106, calls attention to the fact that "the background of . . . [Quesnay's] *Tableau* was provided by the idea of distributive justice which was given a mathematical formulation." Quesnay, he writes (p. 104), thought that the rules of the unchangeable *ordre naturel* had "imposed themselves upon human reasoning with a precision which demonstrated itself 'geometrically and arithmetically'."

29 *The Thirteen Books of Euclid's Elements*, trans. Thomas L. Heath, 2nd ed. (New York: Dover, 1956), II, p. 112.

30 As noted by Pribram, *History of Economic Reasoning*, p. 45, the scholastics applied this principle to their concept of "commutative justice" and advocated a balance between imports and exports, since they felt that "any gain in trade could be made only at a corresponding loss of the partner." Although mercantilist writers generally followed this line of reasoning, it was questioned, as also pointed out by Pribram (p. 67), by Sir Dudley North in his *Discourse upon Trade* (1691).

31 Meikle ("Aristotle and the Political Economy of the Polis," p. 60) thinks that *demand* is a mistranslation of the word *chreia*, as does Finley. Samuel (*From Athens to Alexandria*, n. 14, pp. 16–17), however, prefers the use of *demand* as more in keeping with Aristotle's concept. Some translators use the word *need* as a better approximation of the meaning. In their commentary Gauthier and Jolif (II, p. 377) discuss passages from the *Eudemian Ethics* (1242b6) and the *Magna Moralia* (1194a7–25) which also convey a concept of mutual subjective need in exchange. They further point out (pp. 378–79) that the idea that proportional requital holds the city together may have been inspired by Plato's *Republic* (II.369; 370e–371a), where mutual benefit is said to be the basis for the city.

32 Ross's explanation of this point (*Works of Aristotle*, IX, 1133b, n.3) is within the confines of the assumption that one man's gain in barter is another's loss and that the analysis is an attempt to explain free bargaining. It is clear, however, from Aristotle's whole treatment of this matter that his analysis is in the context of an administrative decision by an arbitrator or mediator fixing each party's share in the additional benefits created by trade.

33 *The Laws of Human Relations and the Rules of Human Action Derived Therefrom*, trans. from the 1854 German edition by Rudolph C. Blitz (Cambridge, Mass. and London: MIT Press, 1983), chap. 7, pp. 95–120.

34 William Jaffé, "Edgeworth's Contract Curve: Part 2. Two Figures in Its Protohistory: Aristotle and Gossen," *History of Political Economy* 6 (1974), pp. 381–404.

35 *History of English Thought in the Eighteenth Century*, 3rd ed. (New York: Putnam's, 1927), p. 297. Adam Smith was emphatic on the principle that participants in exchange are drawn together by *mutual* advantage. He began Book III of the *Wealth of Nations* with the statement, "The great commerce of every civilized society, is that carried on between the inhabitants of the town and those of the country. . . . The town, in which there neither is nor can be any reproduction of substances, may very properly be said to gain its whole wealth and subsistence from the country. We must not, however, upon this account, imagine that the

gain of the town is the loss of the country. The gains of both are mutual and reciprocal, and the division of labor is in this, as in all other cases, advantageous to all the different persons employed in the various occupations into which it is subdivided." See Gloria Vivenza, "Aristotele, Adam Smith e la teoria del valore," *Economia e storia: Rivista italiana di storia economica e sociale* 5 (1984), pp. 129–52, reprinted in *Adam Smith e la cultura classica*, pp. 192–206, for an analysis of the similarities and differences in Aristotle's and Adam Smith's theories of exchange value.

36 "Aristotle and the Political Economy of the Polis," p. 57.

37 If the phrase *subjectively measured need* is substituted for *demand*, the subtle implications of this statement would be clearer.

38 "Aristotle's Theory of Exchange: An Enquiry into the Origin of Economic Analysis," *Proc. of the American Philosophical Society* 96 (1952), pp. 55–59.

39 Gauthier and Jolif, *L'Éthique à Nicomaque*, II, Part I, p. 372, discuss the confusion over the term *antipeponthos* and its significance for the concept of reciprocal proportion, but go no further.

40 *Mathematics in Aristotle* (Oxford: Clarendon Press, 1949), pp. 272–76. When W. F. R. Hardie (*Aristotle's Ethical Theory*, p. 211) comments that "Heath argues convincingly against finding the Euclidean reciprocal proportion in Chapter 5," Hardie is referring to the inverse geometric proportion and not the harmonic proportion, which he never develops. He takes no account of Soudek's explanation. R. D. Theocharis, *Early Developments in Mathematical Economics*, 2nd ed. (Philadelphia: Porcupine Press, 1983), discusses Aristotle's use of mathematics in economic argument, but he ignores the mathematical import of the harmonic proportion and the Eudoxan dyad (to be described later), as well as earlier relevant literature. See also George W. Evans, "The Greek Idea of Proportion," *American Mathematical Monthly* 34 (1927), pp. 354–57.

41 F. M. Cornford, *Unwritten Philosophy*, p. 19.

42 J. Walter Jones, *Law and Legal Theory of the Greeks*, pp. 17–18, discusses some of these concepts. See also Edward A. Lippman, *Musical Thought in Ancient Greece* (New York and London: Columbia University Press, 1964), pp. 1–44; and J. Curtis, "Reconstruction of the Greater Perfect System," *Journal of Hellenic Studies* 44 (1924), pp. 10–23, for a highly technical analysis of Greek scales.

43 Frg. 10, *Ancilla to the Pre-Socratic Philosophers*, p. 75. In Frg. 6 (p. 74), before describing the conjunction of the tetrachords, Philolaus observes, "Now the things which were like and related needed no harmony; but the things which were unlike and unrelated and unequally arranged are necessarily fastened together by such a harmony, through which they are destined to endure in the universe." This strongly suggests a concept of commensurability.

44 Lippman, *Musical Thought in Ancient Greece*, p. 69. Victor Ehrenberg, *Sophocles and Pericles*, p. 92, contended that "Damon dealt with the moral and political influence of music and musical education."

45 Philip Shuchman, "Aristotle's Conception of Contract," *Journal of the History of Ideas* 23 (1962), pp. 257–64, fails to understand this concept and its implications for contract theory when applied to isolated exchange when he persists (p. 261) in dealing with Aristotle's analysis of "friendships of utility" as a zero-sum relationship, even after he quotes a clear statement from Aristotle on anticipated mutual advantage generated by such a relationship. Kenneth D. Alpern, "Aristotle on the Friendships of Utility and Pleasure," *Journal of the History of Philosophy* 21 (1983), pp. 303–15, analyzes Aristotle's concept of the "legal-utility friend-

ship" (developed in *N.E.* VIII) and shows some insight into the two-phase aspect of commercial dealings, but he does not connect his discussion with Aristotle's analysis of exchange in *N.E.*, V.

46 See Hilail Gildin, "Aristotle and the Moral Square of Opposition," *Monist* 54 (1970), pp. 100–105, for a treatment of the use of the traditional square of opposition to present the concept of the overlap of opposing perspectives.

47 "Proportions of Exchange," *Economic Journal* 70 (1960), p. 778. Shaynin suggests six different interpretations of equality in two-party exchange.

48 I.ix (Cannan ed., p. 97).

49 Fritz Pringsheim, *The Greek Law of Sale* (Weimer: Böhlau, 1950), pp. 130, 137, 168. See also Louis Gernet, *Droit et société dans la Grèce ancienne* (Paris: Sirey, 1955), pp. 173–236. Max Hamburger, *Morals and Law*, pp. 12–32, discusses the development in Aristotle and his predecessors of the theory of voluntary action and choice as the basis for the legal theory of culpability. H. D. P. Lee, "The Legal Background of Two Passages in the *Nicomachean Ethics*," *Classical Quarterly* 31 (1937), pp. 129–40, analyzes some of the parallels between passages in Aristotle's *Ethics* and Roman law. See also F. A. Siegler, "Voluntary and Involuntary," *Monist* 50 (1968), pp. 268–87.

50 See "Fair Value," in Henry C. Black, *Black's Law Dictionary*, 3rd ed. (St. Paul, Minn.: West, 1933), p. 746. The reciprocal of voluntarism is "undue influence" or "duress" in modern law. See John P. Dawson, "Economic Duress: An Essay in Perspective," *Michigan Law Review* 45 (1947), pp. 253–90. Odd Langholm, "Economic Freedom in Scholastic Thought," *History of Political Economy* 14 (1982), pp. 260–83, traces the willing buyer/willing seller idea through Roman law and the writings of the scholastics, thence to Hobbes and Pufendorf. Absolutely central to Hobbes's system, he notes, was the scholastic notion, based on the *Digest*, that *volenti non fit injuria* (the willing man receives no injury).

51 Aristotle makes the same point at *N.E.* 1134b8. Plato discusses the Glaucus-Diomede exchange in the *Symposium* (218e–219a), where Alcibiades proposes an exchange for mutual advantage with Socrates, but resolves the problem of dividing the benefits fairly by delegating to Socrates the authority to effect the division administratively. C. J. Rowe's discussion, "The *Eudemian* and *Nicomachean Ethics*: A Study in the Development of Aristotle's Thought," *Proc. of the Cambridge Philological Society*, Suppl. Vol. 3 (1971), pp. 9–123, which gives considerable attention to whether or not a man can voluntarily be unjust to himself, would have been more helpful had he considered the problem implicit in the division of a surplus between parties engaging in mutually beneficial exchange. Xenophon's treatment of the exchange of tunics between the tall and short boys in the *Cyropaedia*, discussed in Chapter III, sheds light on the matter. This issue is analyzed in S. Todd Lowry, "Aristotle's Mathematical Analysis of Exchange," *History of Political Economy* 1 (1969), pp. 44–66.

52 III(i)6; III(iv)3, in Sprague, ed., *The Older Sophists*. See also Adkins, *Merit and Responsibility*, pp. 103–4. Hamburger, *Morals and the Law*, p. 18, takes note of the fact that Antiphon's discussion "displays the subtlest distinctions with regard to negligence, contributory negligence, accident, etc." and that "its influence is still discernible in Justinian's *Digest* and *Institutes*."

53 *Lives* III.xxxvi.

54 F. Y. Edgeworth, *Mathematical Psychics: An Essay on the Application of Mathematics to the Moral Sciences* (1881; reprint, New York: Macmillan, 1925). See William Jaffé, "Edgeworth's Contract Curve," who discusses the Paretian origin of the "box diagram."

55 The problem posed by a prisoner's ransom and that of a father attempting to buy the freedom of a son begotten by a slave woman belonging to another are recurring issues in ancient discussions. In these two cases, the ransomer would be expected to be willing to pay an exorbitant sum, far above the going price for the subject of the transaction as a mere slave. Plescia, *Oath and Perjury in Ancient Greece*, p. 36, states that these problems were legally required to be resolved by an arbitrator under oath.

56 Marshall Clagett, *Greek Science in Antiquity* (New York: Abelard-Schuman, 1955), p. 40, made this notion clear. "With a pathology based on excess or defect of body fluids or some similar disharmony," he wrote, "Hippocratic therapeutics concerned itself with the restoration of the normal proportion or mixture of fluids or the general harmony of the body. And even though nature tended to restore the balance, the physician actively aided."

57 *Euclid's Elements*, II, pp. 292–93.

58 Ibid., p. 112.

59 Ibid., p. 188.

60 Heath, *Mathematics in Aristotle*, p. 273. Winspear, *Genesis of Plato's Thought*, p. 75, credits Archytas with being "the first to distinguish harmonic from arithmetic and geometrical progression" and with "the solution of the duplication of the cube."

61 For background on this musical development, see Guthrie, *History of Greek Philosophy*, I, p. 299.

62 A twelfth century illustration in Boethius's *De Musica* portrays Boethius, the Roman transmitter of Greek arithmetic to the Middle Ages, studying tonal intervals with a monochord. See Adolf Katznellenbogen, "The Representation of the Seven Liberal Arts," in *Twelfth-Century Europe and the Foundations of Modern Society*, ed. Marshall Clagett, Gaines Post, and Robert C. Reynolds (Madison: University of Wisconsin Press, 1961), pp. 46–47. Guthrie, *History of Greek Philosophy*, I, p. 224, describes the use of the monochord. Clagett, *Greek Science in Antiquity*, p. 151, mentions that Boethius correlated the three proportions, the arithmetic, geometric, and the harmonic, with the three forms of government: oligarchy, aristocracy, and democracy. Boethius's approach to both arithmetic and music, as noted by Alison White, "Boethius in the Medieval Quadrivium," in *Boethius: His Life, Thought and Influence*, ed. Margaret Gibson (Oxford: Basil Blackwell, 1981), was "speculative and mathematical." His harmonic theory, White points out, "was . . . based on Pythagorean mathematics of proportion, not music-making" (p. 163).

63 Guthrie, *History of Greek Philosophy*, I, p. 221, mentions Aristoxenus's contention that Pythagoras "derived his enthusiasm for the study of number from its practical applications in commerce."

64 See K. R. Popper, *Open Society and Its Enemies*, I, pp. 248–53, for an extensive discussion of Plato's views on irrational numbers and the problem of incommensurable magnitudes. Had Popper assimilated the significance of the harmonic proportion in Greek political theory, his analysis might have been even more penetrating. Kurt von Fritz, "The Discovery of Incommensurability by Hippasus of Metapontum," *Annals of Mathematics* 46 (1945), pp. 242–64, discusses the significance of irrational numbers for Pythagorean theory. On Pythagorean mathematics generally, see Jacob Klein, *Greek Mathematical Thought and the Origin of Algebra*, trans. Eva Brann (Cambridge, Mass., and London: MIT Press, 1968), pp. 63–69, and Guthrie, *History of Greek Philosophy*, I, pp. 205–26.

65 *A History of Greek Mathematics* (Oxford: Clarendon Press, 1921), I, p. 86. Early use of the harmonic mean has also been attributed to Hippasus of Metapontum and to Philolaus.

Plato's description of a mean at *Timaeus* 36a is a harmonic one: "exceeding and exceeded by equal parts of its extremes [as for example, 1, 4/3, 2, in which the mean 4/3 is one third of 1 more than 1, and one third of 2 less than 2]."

66 *History of Greek Mathematics*, I, p. 85.

67 "Aristotle's Theory of Exchange," p. 599.

68 *History of Greek Mathematics*, I, 86.

69 Ibid., p. 85. See also Felix M. Cleve, *The Giants of Pre-Sophistic Greek Philosophy* (The Hague: Martinus Nijhoff, 1965), II, p. 504. The cube in some contexts was considered a symbol of the coherence of the universe.

70 Heath, Notes to *Euclid's Elements*, II, pp. 293–94. Twelve is also the number of pentagonal faces on the dodecahedron, another symbol for the universe. Stitched-together pentagonal leather faces of the dodecahedron were stuffed to make a ball used in ancient Greece which simulated the sphere of the universe.

71 *Evolution of Mathematical Concepts*, p. 76. Two numbers are amicable "if each is the sum of the proper divisors of the other." Pythagoras is supposed to have defined "friendship" as a relationship such as 220 and 284, where each of the two numbers is the sum of the whole number submultiples of the other.

72 Aristotle, *Problemata* 919a1, 921a10.

73 *Select Fragments*, XII, pp. 95–97; see esp. n. 3, p. 95; and n. 5, p. 96.

74 R. Sorabji, "Aristotle, Mathematics and Colour," *Classical Quarterly* 22 (1972), pp. 293–308, discusses Aristotle's use of proportions derived from musical theory to explain the intermediate colors between black and white.

75 Nicole Oresme, *Le Livre de Ethiques d'Aristote*, published from the text of MS. 2902, Bibliothèque Royale de Belgique, with a critical introduction and notes by A. D. Menut (New York: G. E. Stechert, 1940), p. 293.

76 In Plato's *Timaeus* (36a–d), there is a reference to crossing diagonals in a discussion in which he derives a harmonic mean, but there has apparently been no attempt by classicists to relate this exposition to Aristotle's "figure."

77 Laurentianus LXXXI, 11, probably from the ninth century A.D., in Florence.

78 Letter to author, November 13, 1980.

79 One is reminded that Adam Smith used computations to make comparisons of various kinds, but he made it clear that the calculations were secondary to his analysis, remarking, "I have no great faith in political arithmetic" (*Wealth of Nations*, IV.v [Cannan ed., p. 501]).

80 See Heath's discussion (*Mathematics in Aristotle*, pp. 19–20, 88–91) of Aristotle's theory of figure developed in his *Categories* (c.8.10a11–24). Heath comments (p. 19) that "figures according to Aristotle differ from the generality of qualities in that they do not admit of more and less."

81 Wicksteed explained the same process when he observed that "whenever a considerable amount of any commodity is purchased at a given price, and some, but not so much, of that same commodity would have been purchased had the price been higher," the purchaser "gets the whole of the commodity at such a price that the least significant or marginal increment (the portion which he would go without if the price rose a little) is worth the price; and consequently all the other increments are worth more. What he gets, therefore, taken in bulk, is worth more than he pays for it" (*The Common Sense of Political Economy and Selected Papers and Reviews on Economic Theory*, I, p. 43).

82 Both Turgot (*Valeurs et monnaies*, 1769) and Condillac (*Le Commerce et le gouvernement*, 1776), whose works may have contributed to Gossen's, clearly understood that the subjective

perspective of each trader regarding the value of his own goods, compared to the value of the other's goods, is the first stage in exchange that "holds all things together." The second stage involves negotiation or arbitration, since subjective values seldom coincide exactly. P. D. Groenewegen, "A Reappraisal of Turgot's Theory of Value, Exchange, and Price Determination," *History of Political Economy* 2 (1970), p. 179, n. 9, comments that Turgot was familiar with Aristotle's work and with that of many of the scholastics. See, for a discussion of Turgot's and Condillac's understanding of subjective appraisal as a precondition of exchange, Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, trans. A. M. Sheridan Smith (New York: Pantheon Books, 1970), pp. 196–97.

83 This may suggest a rule for appraisal by oath in litigation and arbitration.

84 124 N.Y. 538, 27 N.E. 256 (1891).

85 James R. Newman, *The World of Mathematics* (New York: Simon and Schuster, 1956), I, p. 99, terms incommensurables "the geometrical equivalent of irrationals in arithmetic."

86 Silvio Maracchia, "Aristotele e l'incommensurabilità," *Archive for the History of Exact Science* 21 (1979–80), pp. 201–28, catalogs in an appendix references in Aristotle's works to incommensurability. See M. Andic and M. Brown, "False Statement in the *Sophist* and Theatetus' Mathematics," *Phoenix* 27 (1973), pp. 26–34, for an account of the parallels between Plato's treatment of false statement and Theaetetus's work on incommensurables, which, according to the authors, was admired by Plato.

87 *Plato's Late Ontology: A Riddle Resolved* (Princeton, N.J.: Princeton University Press, 1983). Contending that Plato was more of a Pythagorean that is usually acknowledged, Scott A. Olsen, "The Pythagorean Plato and the Golden Section: A Study in Abductive Inference" (Ph.D. diss., University of Florida, 1983), tries to reconstruct the secret mathematical content of Plato's works. See also I. Bulmer-Thomas, "Plato's Theory of Number," *Classical Quarterly* 32 (1983), pp. 375–84. Jay Hambidge, *The Elements of Dynamic Symmetry* (1926; reprint, New York: Dover, 1967), pp. 17–18, describes some of the dynamic mathematical forms used by the ancient Greeks to approach the problem of incommensurability. His work was treated at greater length in S. Todd Lowry, "Aristotle's Mathematical Analysis of Exchange." See p. 62 for a speculative reconstruction of a possible treatment of a pattern of dynamic interaction. It might be useful to correlate the concept of dynamic symmetry with Plato's reference (*Tim.* 36a–d) to a harmonic mean and crossing diagonals, which he projects into a circle or spiral.

88 James R. Newman, *World of Mathematics*, I, p. 98. According to D'Arcy W. Thompson, *Science and the Classics* (London: Oxford University Press, 1949), p. 196, "That the side and diagonal numbers show us what Plato means by the Great-and-small, or Aristotle by his Excess-and-defect, is certain." The statement is from chap. 8, a reprint of Thompson's "Excess and Defect: Or the Little More and the Little Less," *Mind* 38 (1929), pp. 43–55. See also Anders Wedberg, *Plato's Philosophy of Mathematics* (Stockholm: Almquist & Wiksell, 1955).

89 This type of process in bargaining was characterized by Walras as *tâtonnement* or "groping" toward an equilibrium price. Edgeworth, *Papers Relating to Political Economy* (London: Macmillan, 1925), II, p. 311, however, recognized a secondary aspect of the bargaining process requiring recontracting as an intermediate step. See William Jaffé, "Walras's Theory of *Tâtonnement*: A Critique of Recent Interpretations," *Journal of Political Economy* 75 (1967), pp. 1–19; and Don Patinkin, *Money, Interest and Prices*, 2nd ed. (New York: Harper & Row, 1965), pp. 38–40, 531–40, who explains Walras's theory of *tâtonnement* and traces the influence of the theory on later economists. The doctrine of *tâtonnement* treats a two-

phase process moving toward an equilibrium in a market setting rather than isolated exchange, which was the context in which Aristotle analyzed "association" for exchange.

90 See, for a general treatment of the golden mean, Matila Ghyka, A *Practical Handbook of Geometrical Composition and Design* (London: A. Tiranti, 1952), and *The Geometry of Art and Life* (1946; reprint, New York: Dover, 1977), pp. 7–19.

91 Clagett, *Greek Science in Antiquity*, pp. 67–68, points out that Aristotle made scientific generalizations by presenting specific comparisons in a series rather than in generalized formulas. He illustrates this with Aristotle's discussion of the kinematic aspect of movement and his failure to evolve the formula V = ST. Aristotle's approach illustrates the same pattern of thought as that used in a numerical series in a dyad. Thompson, *Science and the Classics*, p. 212, notes that Aristotle's theory of species reflects a notion of a Platonic Ideal Type expressed by an aggregation of instances which deviate from but approach the form.

92 The Fibonacci series was named after Leonardo of Pisa (Fibonacci), who introduced western Arabic arithmetic and bookkeeping procedures into northern Italy in the early thirteenth century. The ratio of .618034 to 1 is the mathematical proportion for shapes as diverse as the spiral galaxies in outer space, the shell of the chambered nautilus, the Parthenon, and the spiral arrangement of seeds in a sunflower. Widely used in Greek art, when it was rediscovered in Europe it was recognized as a principle of natural aesthetics, and the ratio was extensively used in Renaissance art and architecture. In the 1960s George E. Duckworth discovered that Vergil's *Aeneid* is structured on the basis of the golden or "divine" section. See his *Structural Patterns and Proportions in Vergil's Aeneid: A Study in Mathematical Composition* (Ann Arbor: University of Michigan Press, 1962). See also on the Fibonacci sequence and its uses: Martin Gardner, "The Multiple Fascinations of the Fibonacci Sequence," *Scientific American* 220 (1969), pp. 116–20; M. Borissavlievich, *The Golden Number and the Scientific Aesthetics of Architecture* (New York: Philosophical Library, 1958); W. Hovgaard, "The Arsenal in Piraeus and the Ancient Building Rules," *Isis* 8 (1926), pp. 15 ff.; Matila Ghyka, "The Pythagorean and Platonic Scientific Criterion of the Beautiful in Classical Western Art," in F. S. C. Northrup, ed., *Ideological Differences in World Order: Studies in the Philosophy and Science of the World's Cultures* (New Haven: Yale University Press, 1949), pp. 90–116; and Thompson, "Excess and Defect," pp. 43–55, and *On Growth and Form*, 2nd ed. (Cambridge: Cambridge University Press, 1942). A. J. Close, "Philosophical Theories of Art and Nature in Classical Antiquity," *Journal of the History of Ideas* 32 (1971), pp. 163–84, traces the influence of classical theories of art and nature on later Renaissance thought.

93 See Thompson, *Science and the Classics*, p. 206.

94 Philip H. Wicksteed, *The Common Sense of Political Economy and Selected Papers and Reviews on Economic Theory*.

95 See Victor E. Smith, "The Classicists' Use of Demand," *Journal of Political Economy* 59 (1951), p. 243.

96 "Aristotle and Economic Analysis," p. 8.

97 See, for example, Lysias's speech, "Against the Corn Dealers" (*Or. XII*); and Phillip V. Stanley, "*Agoranomoi* and *Metronomoi*: Athenian Market Officials and Regulations," *Ancient World* 11 (1979), pp. 13–19. Polanyi claimed that the researches of later economic anthropologists have confirmed as a "phenomenon of general validity" Max Weber's assertion that both the exchange use of money and organized markets occurred first in external (rather than domestic) trade. See Polanyi, *The Livelihood of Man*, ed. Harry W. Pearson (New York: Academic Press, 1977), p. 78.

98 Xenophon, *Cyrop.*, VIII.2.4–5.
99 Wendell C. Gordon, *The Political Economy of Latin America* (New York and London: Columbia University Press, 1965), pp. 58–59.
100 *Protag.* 328b–c. Aristotle also mentions Protagoras's method of payment at *N.E.* 1164a25. Gauthier and Jolif, *L'Éthique à Nicomaque*, II, pp. 375–76, discuss the role of the temple of the Graces in promoting good works and giving and receiving. They cite Seneca and Chrysippus, among others.
101 Plescia, *Oath and Perjury in Ancient Greece*, pp. 41, 35–40. See also Louis Gernet, "L'institution des arbitres publics à Athènes," *Revue des études grecques* 52 (1939), pp. 389–414; reprinted in *Droit et société dans la Grèce ancienne*, pp. 103–19.
102 "Aristotle and the Political Economy of the Polis," p. 73. The main theme of Aristophanes' *Acharnians* is that exchange will bind men together and eliminate war.

VIII From Two-Party Exchanges to Social Economy: Aristotle's Theory of the Polis

1 *Mor.* (On Love of Wealth, 524).
2 See Kurt Singer, "*Oikonomia:* An Inquiry into the Beginnings of Economic Thought and Language," for a discussion of the term and its evolution. In the [Pseudo-] Platonic *Eryxias*, the idea is repeated (394) that competence in the management of an estate is a marketable skill, echoing Xenophon's similar statement, discussed in Chapter III. A passage in this dialogue (393–94) centers upon the question of whether this skill is the art which "is of the greatest value to men." See, on the dialogue, D. E. Eichholz, "The Pseudo-Platonic Dialogue *Eryxias*," *Classical Quarterly* 29 (1935), pp. 129–49. According to Marc Shell, *The Economy of Literature* (Baltimore and London: Johns Hopkins University Press, 1980), p. 102, n. 26, uses of the term *oikonomia* by the scholiasts are collected in Adolfus Trendelenburg's *Grammaticorum Graecorum de Arte Tragica Iudiciorum Reliquiae* (Bonn, 1867), pp. 94–105.
3 Andreades, *History of Greek Public Finance*, I, pp. 81–82, traces the term *political economy* to Antoine de Montchrétien's *Traité de l'oeconomie politique*, published in 1615. Andreades writes: "A study of this work has convinced me first that the writer knew Greek thoroughly and that apart from other writers whom he cites (e.g. Thales, Archytas of Tarentum) he had carefully read Xenophon and in particular Aristotle, from whom he quotes no less than six definitions; second, that he used the term political economy not in ignorance of its real meaning but because as a mercantilist he expected everything of the state, even matters in the domain of economics. The misconception is due then to later writers, who, though not sharing the views of Montchrétien as to the necessity of the continual intervention of the state in matters of social economy, nevertheless applied to this the title which he had given it." Both James E. King, "The Origin of the Term 'Political Economy,'" *Journal of Modern History* 20 (1948), pp. 230–31, and Thomas O. Nitsch, "On the Origin, Renaissance, and Recrudescence of *Politikē Oikonomia:* A Progress Report," *Midsouth Journal of Economics* 4 (1980), pp. 83–97, cite earlier uses of the term. See the reference in Chapter II to Protagoras's claim to teach "the proper management of one's own affairs, how best to run one's household, and the management of public affairs" and to the discussion in Chapter III of Xenophon's treatment of an art or technical proficiency called the "royal art" or the "kingly art." See also J. J. Spengler, "Herodotus on the Subject Matter of Economics," *Scientific Monthly* 81 (1955), pp. 276–85; and William Baumol, "Economics of Athenian Drama: Its

Relevance for the Arts in a Small City Today," *Quarterly Journal of Economics* 85 (1971), pp. 365–76.

4 See Finley's discussion ("Aristotle and Economic Analysis," pp. 7–8), of *koinonia*, which he terms "the central concept" of Aristotle's *Ethics* and *Politics*. He adds: "Its range of meanings extends from the *polis* itself, the highest form of *koinonia*, to temporary associations such as sailors on a voyage, soldiers in a campaign, or the parties in an exchange of goods. It is a 'natural' form of association—man is by nature a *zoön koinonikon* as well as a *zoön oikonomikon* (household being) and a *zoön politikon* (*polis*-being)."

5 This is an early example of the tautology of a rationally determined equilibrium, where equilibrium is defined as an expression of rationality, and rationality is deduced from the premise of an equilibrium.

6 As mentioned in Chapter IV, David J. Furley, "Antiphon's Case Against Justice," p. 90, finds the beginnings of utilitarianism in Antiphon's analysis of justice according to nature.

7 *Leviathan* (1651), I.4; I.13. Hobbes possibly was individualizing Plato's more general statement (*Laws* 626a) that "the normal attitude of a city to all other cities is one of undeclared warfare."

8 In the *Hiero* (III.5–9), Xenophon anticipated the problem of the necessity of mutual trust in any kind of human interaction, but he rejected the authoritarian solution advanced by Plato (and later Hobbes). He there pictures the plight of the tyrant whose very position of arbitrary authority prevents him from entering into relations of trust with anyone, even with wife, siblings, or children, who, the tyrant points out, have all been known to kill tyrants in order to seize power themselves. As will be noted later in the chapter, Aristotle attributes the origin of the *polis* to the relations of trust between husband and wife and parents and children which make possible larger human agglomerations.

9 It is possible that the physical corollary of this problem was addressed by Epicurus's theory of the "swerving of the atoms" which explained the bonding of isolated units by introducing an inherent potential for attraction into the atomic system of units or monads.

10 The matter is clarified in Winspear's discussion (*Genesis of Plato's Thought*, chap. 8, pp. 195–202) of the social compact thesis and the development of the basis of the state in Plato's *Republic*.

11 This is opposite to the approach in the *Republic* where, as was pointed out in Chapter IV, Plato sought the nature of order and justice by looking first at the larger unit of the city, where, he said, the principles of the smaller unit of the individual are replicated and can be more easily seen.

12 In Plato's *Laws* (903b–c), the Athenian recommends administrative enforcement of this perspective on the craftsman "down to the least detail," for "the life of the whole . . . is not made for thee, but thou for it." See D. G. Ritchie, "Aristotle," in *Palgrave's Dictionary of Political Economy*, ed. Sir Robert H. I. Palgrave (1910; reprint, Detroit: Gale Research, 1976), I, pp. 53–55, for a discussion of this aspect of Aristotle's system.

13 Pribram, *History of Economic Reasoning*, p. 243, calls attention to the fact that the Austrian economist Othmar Spann, writing in the early twentieth century, "applied to social communities the Aristotelian principle that the whole is the first and foremost category of being and prior and superior to its parts." See Spann's *The History of Economics*, trans. from the 19th German ed. by Eden and Cedar Paul (New York: W. W. Norton, 1930).

14 Francis Hutcheson, Adam Smith's teacher, began Book III ("The Principles of Oeconomics and Politics") of his *Short Introduction to Moral Philosophy* (1742) with a discussion of the same elements.

15 See Barker's introduction to Aristotle's *Politics*, pp. xlix, n. 1; lxxiii. On the concept of *physis*, see also A. W. H. Adkins, *From the Many to the One: A Study of Personality and Views of Human Nature in the Context of Ancient Greek Society, Values and Beliefs* (London: Constable, 1970), pp. 112–15. Friedrich Solmsen, "Nature as Craftsman in Greek Thought," *Journal of the History of Ideas* 24 (1963), pp. 473–96, contrasts Aristotle's and Plato's views on nature. Frederick J. E. Woodbridge develops the dynamic aspects of Aristotle's theory of physics. He points out that Aristotle's *Physics* "is not physics at all" but "a theory of nature." See his *Aristotle's Vision of Nature*, ed. J. H. Randall, Jr. (New York and London: Columbia University Press, 1965), pp. 49–75.

16 In *The Parts of Animals* (683a20–25), Aristotle makes the same point, contending that "whenever . . . nature is able to provide two separate instruments for two separate uses, without the one hampering the other, she does so, instead of acting like a coppersmith who for cheapness makes a spit and lampholder in one."

17 The concept of "goods of the body" is very close to the definition of *necessaries* for which Anglo-American law has permitted the enforcement of contracts against minors.

18 In Book II of the *Politics* (1267a), Aristotle discusses Phaleas's correlation of wrongdoing with the various classes of "goods" and their appropriate remedies. A better distribution of property is the remedy suggested for crimes committed "simply through cold or hunger."

19 Long before Aristotle wrote the *Politics*, Aristophanes had parodied diminishing utility in the *Plutus* (173–91). A slave and a master assure the god Wealth that "none ever has enough of thee," although "of all things else a man may have *too* much" (for the slave: loaves, sweets, cheesecakes, dried figs, barley-meal, pea soup; for the master: literature, honor, manliness, ambition, and command). In this vignette, Aristophanes distinguishes between external goods and psychic goods by associating the former with the slave and the latter with the master, but, unlike Aristotle, he does not distinguish between their diminishing utilities and assumes that it is "natural" to have an unlimited desire for monetary wealth but a diminishing desire for psychic values. Theognis (*Elegies* 1157–60) also commented on the unlimited desire for wealth. "Riches and skill," he wrote, "are ever the most irresistible of things to man; for thou canst not surfeit thy heart with riches." Quoted by Joseph B. Gittler, *Social Thought Among the Greeks* (Athens: University of Georgia Press, 1941), p. 108. Plutarch reiterated the theme in his essay "On Love of Wealth" (*Mor.* 523E) with the observation that "neither silver nor gold allays the craving for money, nor does the greed of gain ever cease." Thucydides (I.70) records a Corinthian speech which characterizes the Athenians as so insatiable that "they toil on in trouble and danger all the days of their life, with little opportunity for enjoying" because they are "ever engaged in getting."

20 Aristotle thus extends the concept of productivity to the exercise of skills in the arts (human capital) as well as to the accumulation of tools or "instruments" (capital goods). The emphasis on productivity as an element of wealth is also seen in the [Pseudo-] Platonic *Eryxias* (403–4), where not only the "instruments" of production are listed as an important aspect of wealth, but also "the instruments by which the instruments are procured, and so on, going back from stage to stage *ad infinitum*." Aristotle makes the point (*Generation of Animals* 730b10–15) that in the carpenter's art, it is the worker who imparts the shape and form to the material, although "no part of the carpenter's art exist(s) within what he makes." "It is his hands," Aristotle remarks, "that move his tools, his tools that move the material; it is his knowledge of his art, and his soul, in which is the form, that move his hands." Aristotle here assimilates Plato's theory of the Ideas or Forms into his notion of embodied skill in the production process, a step toward the labor theory of value.

21 In the *Topics* (II.3) Aristotle reviews a variety of hedonistic measurements to be used to convince an opponent that one choice is preferable to another. The marginal utility aspect of this discussion and its parallelism with modern Austrian economic thought is treated in Chapter VI.

22 W. Mathie emphasizes the importance of the element of self-sufficiency in Aristotle's system. See his "Property in the Political Science of Aristotle" in *Theories of Property: Aristotle to the Present*, ed. Anthony Parel and Thomas Flanagan (Waterloo, Canada: Wilfrid Laurier University Press, 1979), pp. 13–32.

23 See William Kern, "Returning to the Aristotelian Paradigm: Daly and Schumacher," for a discussion of the use in modern economic theory of the Aristotelian solution of limiting wants as a rational response to the scarcity of resources; and Spencer J. Pack, "Aristotle and the Problem of Insatiable Desires," with Kern's reply, *History of Political Economy* 17 (1985), pp. 391–94. It will be remembered that Aristotle commented in the *Rhetoric* (1359b20–25) that "men become richer not only by increasing their existing wealth but also by reducing their expenditure." The same idea is repeated in the *Politics* (1266b) with the remark that "it is more necessary to equalize men's desire than their properties." In the [Pseudo-] Platonic *Eryxias* (405), it is contended that the individual with "few and moderate" needs is better off than one who "has many and great wants and desires." The notion of limiting desire as a means of, in effect, increasing wealth, goes back at least to Solon. Vlastos ("Solonian Justice," p. 78) discusses several Solonian fragments which advance the idea that the man who has "comfort in belly and sides and feet" is as rich as he who has great material wealth since there is a limit to what can be converted into immediate satisfaction and, further, that "since the increase of wealth may not keep pace with an even greater increment of desire, the quotient of satisfaction may decrease with the accumulation of property." "Here," Vlastos states, "in all essentials, is a subjective conception of economic value."

24 IV.1 (Vol. 1, p. 419). Smith's study of the "moral sentiments" was directed toward an explanation of the forces which make human society possible and which explain the bases of relations between self-interested individual members of society. Starting from the hedonistic premise that the most fundamental human sensibilities are in terms of anticipations of pleasure and pain, he needed an explanation of how such self-interested individuals could exist in a social arrangement. Rejecting the theory of a rational social contract, he developed the concept of the "impartial spectator," the inner voice which every man holds in his own breast. The "impartial spectator," with its predilection for "human sympathy," closely parallels Protagoras's principle of "fellow feeling," and represents Smith's projection of a social conscience or consensus as a regulatory mechanism of human behavior, a concept more in common with the ancient Greek tradition than his later reliance on the market for the regulation of economic relations.

25 Ibid., pp. 419–20.

26 *Wealth of Nations*, I.xi (Cannan ed., p. 164).

27 *Stone Age Economics*, pp. 85–86. Sahlins's description of "production for livelihood" (pp. 82–87) has an uncanny resemblance to Aristotle's analysis in the *Politics* of production for use and the theory of the limit. I am grateful to Professor Anton Ploeg of the State University of Utrecht for calling this similarity to my attention and for further pointing out that in Papua, New Guinea, the native population has different terms for goods which correspond closely to Aristotle's three categories.

28 *History of Economic Analysis*, p. 60.

29 II.viii (Cannan ed., p. 625).

30 "Jeffersonian Political Economy and the Classical Republican Tradition: Jefferson, Taylor and the Agrarian Republic," *History of Political Economy* 17 (1985), p. 548. Among the ideas Foshee finds common to both classical antiquity and southern leaders were the idealization of agriculture as a way of life and the view that "there is a limit to the amount of wealth which is conducive to human happiness" (p. 531). See also on the classical influence in colonial America, Richard M. Gummere, *The American Colonial Mind and the Classical Tradition* (Cambridge, Mass.: Harvard University Press, 1963).

31 An exception, although generally ignored, is H. Sewell's "Theory of Value Before Adam Smith," *Publications of the American Economic Association*, 3rd Ser., Vol. 2 (1901), pp. 1–127.

32 *History of Economic Analysis*, p. 60.

33 Ibid., p. 63.

34 "Aristotle and Economic Analysis," p. 18.

35 *History of Economic Thought*, p. 35.

36 Barker's interpolations in his translation and his notes reflect such a view and are best disregarded.

37 *Ethics of Aristotle*, II, p. 117. Aristotle's emphasis on production and exchange for use initiated the distinction between exchange value and use value, concepts which would later assume importance in value theory, and is not inconsistent with Adam Smith's similar view (*Wealth of Nations* IV.viii. [Cannan ed., p. 625]) that "consumption is the sole end and purpose of all production."

38 Note the similarity in Aristotle's concern for allocating the surplus to "the offspring" and Adam Smith's contention in the *Moral Sentiments*, discussed above, that the rich are led inevitably to divide the surplus equitably with the poor so that they "advance the interest of the society and afford means to the multiplication of the species." In Plato's ideal city, any surplus above four times a minimum "allotment" guaranteed to each citizen would escheat "to the state and its gods" (*Laws* 744e–745a).

39 Marx formulated the distinction between C-M-C′ and M-C-M′ in modern economic theory (*Capital* I, pp. 83 ff; 131–41). His review of Aristotle's distinction between "economics" (procurement for use) and *chrematistics* (commerce) (I, p. 137, n. 2) is extremely clear. He points out that in *chrematistics*, where money is the object of exchange, there is no limit to accumulation because when an activity is an object in itself, there is no end to its fulfillment.

40 See, for a discussion of the subsequent influence of Aristotle's views on the "breeding" of money, E. Cannan, W. D. Ross, J. Bonar, and P. H. Wicksteed, "Who Said 'Barren Metal'?" *Economica* No. 5 (1922), pp. 105–11. See also Carl F. Taeusch, "History of the Concept of Usury," *Journal of the History of Ideas* 3 (1942), pp. 291–318.

41 This idea is developed more fully in Lowry, "Classical Greek Theory of Natural Resource Economics." In order to prevent either "penury" or "opulence" in his ideal state, Plato advocated (*Laws* 745a) that citizens who acquired more than a designated amount of possessions could escape prosecution by "consigning the surplus to the state and its gods."

42 *From Athens to Alexandria*, p. 17, n. 16.

43 Braudel, *Wheels of Commerce*, p. 22, distinguishes earlier forms of exchange based upon reciprocity of needs from capitalism, which, he asserts, is based on an accumulation of power, a "balance of strength." His formulation is not inconsistent with Aristotle's distinction.

44 For discussions of scholastic treatments of Aristotle's theory of money and his analysis of usury, see Odd Langholm, *Wealth and Money in the Aristotelian Tradition: A Study in*

Scholastic Economic Sources [1983] and *The Aristotelian Analysis of Usury* [1984] (Bergen, Oslo, Stavanger, Tromsø: Universitetsforlaget). On nineteenth-century expressions of Aristotelian monetary theory, see "Aristotle" in Palgrave's *Dictionary of Political Economy*, I, p. 54. Arnaud Berthoud, *Aristote et l'argent* (Paris: François Maspero, 1981), analyzes the texts of Book V of the *Ethics* and Book I of the *Politics* with particular reference to economic matters and money. However, he cites no secondary literature and his book has no index. Olivier Picard's "Aristote et la monnaie," *Ktèma* 5 (1980), pp. 267–76, contains a very clear development of Aristotle's monetary theory and his analysis of exchange. His exposition of Aristotle's theory of the limit is consistent with my own interpretation in "Aristotle's 'Natural Limit' and the Economics of Price Regulation," *Greek, Roman and Byzantine Studies* 15 (1974), pp. 57–63.

45 *History of Economic Analysis*, pp. 62–63.

46 "Aristotle, Schumpeter, and the Metallist Tradition," *Quarterly Journal of Economics* 75 (1961), pp. 608–14. Max Alter's attempt to rehabilitate the Schumpeterian view, in my opinion, is not successful. See his "Aristotle and the Metallist Tradition: A Note," *History of Political Economy* 14 (1982), pp. 559–63. Gauthier and Jolif, *L'Éthique à Nicomaque*, II, pp. 382–83, suggest that Aristotle's views on money expressed in the *Politics* were influenced by the cynics, whose views are reflected in the [Pseudo-] Platonic *Eryxias*. However, they are of the opinion that Aristotle's basic attitude toward money was somewhat more conservative and that he held that the commodity value of money is subject to legal specification. This view is close to that of Alter. É. Will, "De l'aspect éthique de l'origine grecque de la monnaie," analyzes Aristotle's discussion of money in the *Ethics* and *Politics* in terms of an ethical and juridical tradition going back to Hesiod. Andreades, *History of Greek Public Finance*, I, p. 143, notes that the ancient Greeks "did not fall into the error of the bullionists" because of their terminological distinction between "wealth in merchandise" and "wealth in money."

47 Unpublished Lectures, 1826–30, Course 1, Lecture 4, "On the Nature of Exchange and Money." Quoted by Marian Bowley, *Nassau Senior and Classical Economics* (London: George Allen & Unwin, 1937), p. 205.

48 Phillip V. Stanley, "*Agoranomoi* and *Metronomoi*," pp. 13–14.

49 According to B. B. Rogers, the translator of the Loeb edition of Aristophanes' plays, the mention of the circulation of copper or debased coinage in both the *Ecclesiazusae* and the *Frogs* refers to the introduction of bronze coins in the archonship of Callias in 406–5 B.C.

50 D.-K. Frg. 89, trans. Margaret E. Reesor, in Sprague, ed., *The Older Sophists*, pp. 276–77.

51 One of Heraclitus's aphorisms goes as follows: "There is an exchange: all things for Fire, and Fire for all things, like goods for gold and gold for goods" (D.-K. Frg. 90, trans. Kathleen Freeman, *Ancilla to the Pre-Socratic Philosophers*, p. 31). See also S. Todd Lowry, "The Archaeology of the Circulation Concept in Economic Theory," *Journal of the History of Ideas* 35 (1974), pp. 429–44.

52 Roebuck, *The Muses at Work*, p. 218. C. H. V. Sutherland, "Corn and Coin: A Note on Greek Commercial Monopolies," *American Journal of Philology* 64 (1943), pp. 129–47, marshals evidence to support his contention that "state-control of coinage went hand in hand with constant efforts to establish state-monopoly of the corn supply."

53 "Casa y Dinero: Sobre la Distincion Aristotelica entre Politica, Economia y Crematistica," trans. from the German by C. D. Corbi, *Ethos: Revista de Filosofia Practica* (Buenos Aires) 9 (1981), pp. 9–35.

54 On such distributions, see James J. Buchanan, *Theorika, A Study of Monetary Distributions to the Athenian Citizenry During the Fifth and Fourth Centuries B.C.*

55 Roebuck, *The Muses at Work*, pp. 218–19.

56 See Fritz Pringsheim, *Greek Law of Sale*, pp. 130, 137, 168.

57 Alasdair MacIntyre, *After Virtue*, p. 128.

58 S. C. Humphreys, *Anthropology and the Greeks*, p. 201, terms the two kinds of exchange analyzed by Aristotle "*oikos*-oriented and market-oriented economic activity," and interprets Aristotle's remarks as advocating the return to a subsistence economy. She adds that "to claim that private interests and public good only required a return to a traditional subsistence economy to effect their reconciliation was in fact a confession of their incompatibility." Aristotle, however, clearly recognized that such a course of action would have to be achieved by legal fiat or regulation. Hans Immler, *Natur in der ökonomischen Theorie* (Wiesbaden: Westdeutscher Verlag, 1985), pp. 27–32, analyses the hiatus between the satisfaction of natural needs through *oikonomia* (production based on nature) and the resort to exchange which permits the unlimited aggregation of money. Warren R. Brown's article "Aristotle's Art of Acquisition and the Conquest of Nature," *Interpretation* 10 (1982), pp. 159–95, is written without the benefit of reference to much of the relevant secondary literature. Brown does attempt to deal with Aristotle's notion of limit and points out that household management and unlimited acquisition have different objectives. Mary P. Nichols, "The Good Life, Slavery, and Acquisition: Aristotle's Introduction to Politics," *Interpretation* 11 (1983), pp. 171–83, argues that, in Book I of the *Politics*, Aristotle's aim is to call attention to man's dependence on or slavery to nature, a bondage partly relieved by commerce since it satisfies some of man's basic needs. She makes the further point that Aristotle insisted that, although pleasure and pain (hedonism) are sufficient guides for the lower animals, human beings require speech and the political art to work out adequate adjustments to nature.

59 *A Science in Its Youth: Pre-Marxian Political Economy*, trans. K. M. Cook (Moscow: Progress Publishers, 1975), p. 29.

60 *The Politics of Aristotle* (Oxford: Oxford University Press, 1887), I, p. 131.

61 For a fuller discussion of Aristotle's theory of the natural limit, see S. Todd Lowry, "Aristotle's 'Natural Limit' and the Economics of Price Regulation."

62 See, generally, for discussions of the atomist influence, A. T. Cole, *Democritus and the Sources of Greek Anthropology*; and David J. Furley, *Two Studies in the Greek Atomists.*

63 *The Growth of Economic Thought*, rev. ed. (Durham, N.C.: Duke University Press, 1983), pp. 24–34. Thomas J. Lewis, "Acquisition and Anxiety: Aristotle's Case against the Market," *Canadian Journal of Economics* 11 (1978), pp. 69–90, takes a contrary position, speculatively analyzing this material as a concern by Aristotle with "anxiety" and ethical pressures associated with transactions among friends. He takes no notice of conflicting interpretations.

64 "Equality and Justice in Early Greek Cosmologies," *Classical Philology* 42 (1947), pp. 157–78.

65 Aristotle is here discussing the *physical* bases of riches and not money wealth. Newman, *Politics of Aristotle*, I, p. 138, comments that Aristotle "appears to understand better the true nature of Wealth than the laws of its production or the office of Capital." See Lowry, "Classical Greek Theory of Natural Resource Economics," where the argument is developed that Aristotle, as well as Xenophon, treated the human variable as the primary potential source of increased wealth.

66 In discussing the same passage from Solon, Plutarch (*Mor.*, On Love of Wealth, 524) commented that "for men of sense natural wealth does have a limit and a bourne, which is drawn around it by utility as by a compass."

67 In the *Ethics* (1179al) Aristotle pointed out that "we must not think that the man who is to be happy will need many things or great things, merely because he cannot be supremely happy without external goods; for self-sufficiency and action do not involve excess." Neil Morpeth, "Aristotle, Plato and Self-Sufficiency: Ancient and Modern Controversy in Economic History and Theory," *Ancient Society Resources for Teachers* 12 (1982), pp. 34–46, analyzes the contradiction between the aim of self-sufficiency and the pressure toward expansion in the fourth century B.C. *polis* as reflected in Aristotelian and Platonic as well as modern views on the problem. See also É. Will, C. Mossé, and Paul Goukowsky, *Le monde grec et l'orient* (Paris: Presses Universitaires de France, 1975), II, pp. 97–102, 189–91.

68 *Plutus* 192–215.

69 *Origins of Greek Thought*, p. 84.

70 Heraclitus had already made it clear that an ongoing equilibrium is a tautology with his aphorism, mentioned earlier, on the fortuitous equilibrium of tension between a bow and its string and between the arrival and departure of water at a given point in a flowing river.

71 "Equality and Justice in Early Greek Cosmologies," pp. 168 ff.

72 Starr, *Origins of Greek Civilization*, p. 354, contends that the *polis* was emerging in the seventh century as a popular constraint on the excesses of the aristocracy. Solon used an equilibrium concept in picturing himself in lines of poetry quoted by Aristotle in the *Constitution of Athens* (12.4–5) as a "landmark" in a field holding back the rich and the poor from battle "like a wolf among the hounds."

73 There is agreement on this point by both Samuel, *From Athens to Alexandria*, p. 26, and S. Campese, "Polis ed economia in Aristotele," in *Aristotele e la crisi della politica* (Naples: Liguori editore, 1977), p. 54.

74 *Mor.* 524.

75 This idea was perpetuated in French physiocracy and in Jeffersonian agrarianism. W. Cunningham, "The Relativity of Economic Doctrine," *Economic Journal* 2 (1892), pp. 1–16, makes it clear that physiocratic economic theory reflected medieval perspectives. He emphasizes (p. 6) that the medieval distinction between "natural" and "artificial" riches "had a very marked effect on legislation of every kind, and survived in the writings of the physiocrats." Although Cunningham seems to have been unconscious of any Greek influence, his description of medieval economic thought makes it clear that it was dominated by Aristotelian concepts. John S. Marshall, "Aristotle and the Agrarians," *Review of Politics* 9 (1947), pp. 350–61, argues that Aristotle essentially held to a "bounty of nature" theory of wealth, although he appears to be unaware of this aspect of physiocratic doctrine.

76 This idea is developed in the *Moral Sentiments* (II.ii.2 [Vol I, pp. 188–89]), where Smith observes that when the self-interested individual "views himself in the light in which he is conscious that others will view him, he sees that to them he is but one of the multitude, in no respect better than any other in it. If he would act so as that the impartial spectator may enter into the principles of his conduct, which is what of all things he has the greatest desire to do, he must upon this, as upon all other occasions, humble the arrogance of his self-love, and bring it down to something which other men can go along with . . . . In the race for wealth, and honours, and preferments, he may run as hard as he can, and strain every nerve and every muscle, in order to outstrip all his competitors. But if he should justle, or throw down any of them, the indulgence of the spectators is entirely at an end."

77 *Moral Sentiments*, VII.iii.1 (Vol. II, pp. 294–95).

78 The idea of a natural equilibrium point as a referenee base for analyzing soeial processes may have evolved from the Greek coneept of *stasis*, defined by O. A. L. Dieter as "the rest, pause, halt, or standing still, whieh inevitably occurs between opposite as well as between eontrary 'moves,' or motions." Dieter, "*Stasis*," *Speech Monographs* 17 (1950), pp. 345–69, traees the idea from Aristotle's theory of physics and rhetoric into Roman rhetorical theory. The diseussion of the Creek concept of harmony in Chapter VII is also relevant, as is C. W. Maeleod's "Thucydides on Faction" and Ray Nadeau's "Classieal Systems of Stases in Greek: Hermagoras to Hermogenes," *Greek, Roman and Byzantine Studies* 2 (1959), pp. 51–71. I am grateful to my colleague Herman W. Taylor, Jr., for ealling Dieter's and Nadeau's works to my attention. M. I. Finley (*Use and Abuse of History*, p. 129 and n. 20; pp. 130, 133, 141, 161), relying on the definition of *stasis* in the unpublished dissertation of J. C. Oeton, "*Stasis* in the Greek World . . . from the End of the Peloponnesian War to the Death of Alexander the Creat" (Cambridge University, 1967), uses the term to connote the opposite meaning of "strife," "eonfliet," or "faetion," in other words, the *departure* from equilibrium.

79 Thus cost curves in eeonomie textbooks always turn up, indieating higher short-run eosts, and the equilibrium point in perfect competition is always coincident with the onset of inereasing eosts. The empirieal validity of this analytical formulation is, however, eontinually called into question by the evidenee over the past two hundred years of technological and organizational economies of scale, whieh result in *decreasing* costs (and contribute to eeonomie eoneentration, an inherent threat to a competitive equilibrium).

80 In the *Laws* (918b–e), Plato attributed to retailers and the use of eurreney the "eommon function of meeting various demands with supply and distributing eommodities more evenly." This, however, is a purely distributive eoneept, with no suggestion that quantity supplied is a response to a market process. Demosthenes elaimed (XX.31) that the Athenians "consume more imported eorn than any other nation." The supply of timber was controlled by some city-states through a system of import and export lieenses. See also Robin Seager, "Lysias and the Corn-Dealers," *Historia* 15 (1966), pp. 172–84. Heiman Knorringa, *Emporos: Data on Trade and Trader in Creek Literature*, reviews the aneient discussions on the importance of administrative control over imports and exports. See espeeially pp. 72–128 on the regulation of the corn trade. For a eritique of Knorringa's work, see M. I. Finkelstein, "Εμπορος, Ναύκληρος, and Κάπηλος: A Prolegomena to the Study of Athenian Trade," *Classical Philology* 30 (1935), pp. 320–36. Phillippe Cauthier's "De Lysias à Aristote (*Ath. pol.*, 51,4): Le commeree du grain à Athènes et les fonctions des sitophylaques," *Revue historique de droit français et étranger* 59 (1981), pp. 5–28, contains a critieal analysis of the interpretative literature on the Athenian regulation of the eorn trade. S. C. Humphreys contends that aneient markets were too small to attract necessary supplies and that city-states resorted to administrative teehniques and state monopolies to satisfy their needs. For further citations on the relationship between administrative and market struetures, see her "History, Eeonomies and Anthropology: The Work of Karl Polanyi," pp. 165–212.

81 This is suggested by the regulatory and judieial powers of Athenian market offieials. See Phillip V. Stanley, "*Agoranomoi* and *Metronomoi*: Athenian Market Offieials and Regulations." In the *Laws* (915d–e), Plato recommended that all trade in his model city be eonducted in the market at the place specified for that particular type of good and that the extension of credit not be protected by law.

82 *History of Creek Public Finance*, I, p. 295. Andreades asserts (pp. 238–46) that percentage taxation was often levied in the absence of a market transaction. Unfortunately, he does not

examine the appraisal system by which goods were valued for tax purposes. Such public appraisals may well have dominated market price in many areas of trade, instead of vice versa. W. Kendrick Pritchett, "The Attic Stelai," *Hesperia* 22 (1953), pp. 225–29, cites evidence for a fixed tax table.

83 The extent of this dependence is vividly described by Lionel Casson, "Traders and Trading, Classical Athens," *Expedition* 20 (1979), pp. 25–32; reprinted in Casson's *Ancient Trade and Society* (Detroit: Wayne State University Press, 1984). "In the 5th and 4th centuries B.C.," he writes (p. 25), "Athens fed its population—150,000 by conservative estimates—chiefly on grain imported from south Russia, Sicily, and Egypt, and, to a lesser extent, on salt fish from Spain, the Black Sea, and elsewhere. Her formidable fleet of warships was built of timber from Macedon, Asia Minor, and the Levant, her altars burned incense from Arabia, her upper class enjoyed choice foods, textiles, and other luxuries from all over the Mediterranean."

84 On the role of the *metics*, see Charles R. Kennedy's Appendix III to his translation of Demosthenes' *Orations* (London: Henry G. Bohn, 1856). A more recent (and exhaustive) survey of the contemporary evidence about the status of Athenian *metics* is David Whitehead's "The Ideology of the Athenian *Metic*," *Proceedings of the Cambridge Philological Society*, Suppl. Vol. 4 (1977), pp. 1–200. Chap. 5 of R. J. Hopper's *Trade and Industry in Classical Greece* (London: Thames and Hudson, 1979) examines the judicial position of the *metic*.

85 Hicks argues in *A Theory of Economic History* (Oxford: Clarendon Press, 1969), p. 48, that the Mediterranean city-state was the basis for the development of the European market system.

86 "Aristotle and Economic Analysis," p. 24, n. 88.

87 See Jan Pečírka, "A Note on Aristotle's Conception of Citizenship and the Role of Foreigners in Fourth Century Athens," *Eirene* 6 (1967), pp. 23–26.

88 The requirements of commerce resulted in foreigners, including the *metics*, receiving the benefits of Athenian justice. As noted by Edward E. Cohen, *Ancient Athenian Maritime Courts* (Princeton, N.J.: Princeton University Press, 1973), p. 8, the "commercial maritime courts of fourth-century Athens were marked by *rapidity, supranationality* and *rigor*," in contrast to other areas of Greek life where the tradition was that "a foreigner has no rights."

89 "The Athenian Upper Class and New Comedy," *Trans. of the American Philological Association* 106 (1976), pp. 29–59; reprinted in *Ancient Trade and Society*. Wesley E. Thompson, "The Athenian Entrepreneur," cites convincing evidence that the ancient Greeks in no way lacked an "entrepreneurial spirit." He argues that the approach to the Athenian economy represented by Finley, Max Weber, Johannes Hasebroek, and S. C. Humphreys is a "view [which] . . . originated as a healthy reaction to the naive presumption of some nineteenth century historians that Athenian business was conducted along the lines of contemporary industry" (p. 53), but he thinks the result of this reaction has been to polarize economic historians of antiquity into "primitivists" and "modernists." This polarization, he argues, "has obscured the possibility that the Athenian businessman resembled neither Polanyi's African waiting on the shore to exchange a captive for a traditional number of copper bars or the textbook capitalist of 1880 or 1980 solely intent on 'maximizing profits'" (pp. 74–75). Citing evidence that the Roman senatorial elite gave lip service to the notion that *mercature* was a base pursuit while apparently making fortunes from a brisk trade in articles of Italian manufacture, John H. D'Arms questions the application of the status-based model of Finley's *Ancient Economy* to the Roman period. See his "M. I. Rostovtzeff and M. I. Finley: The Status of Traders in the Roman World," in *Ancient and Modern: Essays in Honor of*

Gerald F. Else, ed. John H. D'Arms and John W. Eadie (Ann Arbor, Mich.: Center for Coordination of Ancient and Modern Studies, 1977), pp. 159–79.

90 Aristotle's *Ethics* and *Politics*, I, pp. vii–viii. Schumpeter seemed to agree with Gillies, at least as far as Adam Smith is concerned. He stated in his *History of Economic Analysis* (p. 60) that he would follow the fortunes of "the Greek bequest . . . right through A. Smith's *Wealth of Nations*, the first five chapters of which are but developments of the same line of reasoning."

91 In addition to Odd Langholm's works on Aristotelian influences on scholastic thought, cited earlier, and Gillies's comment on the role of Aristotelianism mentioned at the beginning of this chapter, see, on the circulation of Bruni's translation of the [Pseudo-] Aristotelian *Economics* among professional men, the clergy, and scholars at universities, Josef Soudek, "Leonardo Bruni and His Public." Soudek notes that copies were in the libraries of two popes as well as in those of King Charles V and King Henry IV of France.

92 Thornstein Veblen, "The Preconceptions of Economic Science" in *The Place of Science in Modern Civilization* (New York: Viking Press, 1942), p. 141.

93 "Economists and the History of Ideas," *American Economic Review* 52 (1962), p. 14.

94 *Epistemics & Economics*, p. 66.

95 *Essay on Economy and Value; Being an Enquiry into the Real Nature of Economy* (London: Macmillan, 1936), p. 35. Quoted by Kurt Heinzelman, *The Economics of the Imagination* (Amherst: University of Massachusetts Press, 1980), p. x.

96 De Ste. Croix has perceptively remarked ("Karl Marx and the History of Classical Antiquity," p. 11) that "it is a serious mistake to suppose that unconsciousness of ideology, or even a professed lack of interest in it, is the same thing as absence of ideology."

97 *Epistemics & Economics*, p. 96.

Epilogue

1 *The Entropy Law and the Economic Process* (Cambridge, Mass.: Harvard University Press, 1971), p. 38.

2 It should not be supposed, however, as many economists do, that the concept of the market as a process and its observation and analysis began only in the eighteenth century. Epictetus, a first century Romanized Greek observed in his *Discourses* (II.14.23) that "Cattle and oxen are brought [to the fair or market] to be sold, and most men engage in buying and selling while there are only a few who go merely to see the fair [market], how it is conducted, and why, and who are promoting it, and for what purpose." Epictetus, however, found it difficult to believe that observers of the market, any more than observers of the universe, could presume that such a complicated process could function "in such orderly fashion by sheer accident and chance" and not by the direction of a superior intelligence.

3 "Modelling Physical Reality," *Philosophical Journal* 5 (1968), p. 92.

4 "Walras's Theory of Tâtonnement: A Critique of Recent Interpretations," p. 14.

5 Even this resurgence of naturalism had a Greek lineage, traceable to the revival of Democritean atomism in the eighteenth century and the recurring vogue for the Aristotelian legacy, both of which culminated in Benthamite utilitarianism. Aristotle was, above all, Plato's pupil, and he merged elements of naturalistic science with the imagery of the Ideal Type or model of ultimate rational process in the universe. Langholm ("Economic Freedom in Scholastic Thought") has traced this naturalistic rationalism to Clement of Alexandria and thence to Averroes, who carried it into Spain in his commentaries on Aristotle's *Ethics*, a

work which ultimately provided the basis for a scholastic compromise between moral responsibility and Roman law. Operating under the shadow cast by Protagorean moral relativism, the Averroists were prepared to accept individual subjective values as part of an aggregate groping toward the underlying rational fabric of an ordered system, thus merging natural law and natural rationality into a "value-free" price or, conversely, a price theory of value.

6 The assumption that the surplus necessary for industrial expansion must be derived from agriculture is logically implicit in the premise of a natural competitive market which permits no profit. See Hiram Caton, "The Preindustrial Economics of Adam Smith," *Journal of Economic History* 45 (1985), pp. 833–53, for an analysis of Smith's basically agrarian outlook. R. Koebner, "Adam Smith and the Industrial Revolution," *Economic History Review* 11 (1959), pp. 381–91, argues that the *Wealth of Nations* contains no evidence of Smith's awareness of the industrial revolution.

7 *Use and Abuse of History*, p. 108.

8 *History of the Ancient World*, I, p. 10.

9 "Aristotle and Economic Analysis," p. 15.

10 "Classical Greece," p. 12.

11 "The Greeks and Us," p. 37. See also Momigliano's review of Finley's work in *Rivista Storica Italiana* 87 (1975), pp. 167–70.

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